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ESSAYS

ON

Various Subjects of Practical Farming.

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THE ADVANTAGES OF PLOUGHING LAND IN WIDE BEDS, COMPARED TO THE ORDINARY NARROW BEDS.

(Concluded.)

So far I have generally had reference to the ploughing in narrow and in wide beds as if the land in both cases was drained according to the shape of and over its surface—which is the ordinary and erroneous view; that is, as if both surfaces were nearly or quite impervious to water, and that the surplus water is removed mostly or entirely by flowing off upon the surface, if having any such discharge, or otherwise by evaporation only—and that the water stands upon the lower parts of the surface, in pools, until removed by one or both of these means. This state of things, (which indeed is impossible,) or the nearest approach to it that may exist, would be less unfavorable than is the usual condition, to the drainage operation of narrow beds and frequent shallow alleys. But, in fact, every recently ploughed soil, even if nearly impervious when unbroken and most compact, is rendered permeable, by the ploughing, and capable of absorbing water, and drawing it upwards by capillary attraction, as well as of discharging it by filtration, downwards, or laterally, with a very slight slope. This artificially produced or increased permeable texture of the ploughed layer must continue for many months, and probably is not entirely removed until by the thorough tramping of the land by grazing stock. Hence, with this permeable state of the ploughed layer, there follows a very different operation of the many shallow water-furrows of narrow beds, and the few and deeper of the wide. The former are so little depressed below the ploughed soil, that this soil is in contact with every little narrow standing pool in the furrow—and like a sponge, continues to suck up this water, as fast as the previous supply, with which the soil was gorged, passes into the air by evaporation. Thus all this excess of water is finally removed indeed by evaporation; but not until nearly

all has first passed through and injured the cultivated soil. In the wide beds, and even if with a deeper ploughed layer of earth, the water-furrows are so much deeper, that any water remaining in them is usually below the absorbing action of the ploughed mould. Supposing that the remains of rain-water (after glutting and running off the beds,) stood there in as many little pools as is usual in the water-furrows of narrow beds, still, in the former case, this water could do no harm. Each deeper depression in the impervious and unbroken clay bottom of the water-furrow might indeed be full of water. But it would hold it as would an earthen dish, until removed by direct evaporation.

In connexion with the last observations, I will here remark that the necessity for cross "grips," or small open drains running across the water-furrows in depressions of the natural surface, (to draw off the surplus rain water which would otherwise remain in the alleys in these depressions,) will not be removed by the change from narrow to wide beds. Indeed, when a depression which crosses the direction of the furrows, is much lower than either end of the furrows, a cross-grip is not only essential, but it must be deeper than would be required for the shallower water-furrows of narrow beds. This is one of the few cases of more labor being required by wide beds. But, if the necessary cross grips must be made and kept deeper, they are also much less frequently required, and therefore, taken altogether, the gripping is less troublesome. It is obvious that shallow depressions of surface, which could not be drained by water-furrows of 6 inches deep, might well be by those of 12 to 16 inches. Hence, many of the cross-grips necessary in narrow beds, (perhaps more than half,) could be dispensed with in wide bedding, because superseded by the deeper water-furrows. Still, in small basin-shaped hollows of the natural surface, some remaining pools of rain-water will show in the water-furrows, unless more labor and care are used in making and maintaining grips than would be compensated by the advantage. But however offensive to the eye of a very neat farmer may be such unsightly pools after much rain, this water (for the reasons above stated) is less hurtful to the land and crop than would be a much less quantity held by absorption in the soil, and out of sight. The invisible water in land is more often hurtful to crops than the visible. Yet most farmers of our

country act as if the latter only should be feared and removed—and that water, though saturating the soil, does no great harm, and requires no draining, provided it does not appear, standing or flowing, above the surface of the land.

The most solid objections to wide beds, and their usual peculiar defects, belong to their early condition, soon after their being first formed by the plough. If the land had been before a flush-tilled or even surface—or had been in low beds, of any width, crossing the designed new direction—in either case there will be but little difficulty caused by the desired change to a new form of surface. The time used to change the beds should be when a deep ploughing is desired—as when breaking the land for corn culture, or ploughing under clover in summer to prepare for wheat. If the depth of the soil, and its then condition as to moisture, permit ploughing with teams of 3 or 4 mules, or say to the depth of from 6 to 8 inches, the first ploughing will raise the beds high enough for their safe drainage. If desired, a greater relative height than any particular depth of ploughing of the bed would give, may be obtained by an additional running of the plough in the water-furrow—and still more, if necessary, by throwing the loosened sub-soil so cut by the last furrow, with shovels, thinly over the middle of the bed, or into any adjacent depressions. If the soil is so shallow as not to permit ploughing of more than 4 inches depth, without damage, still the water-furrows may be so deepened in this manner, as to give the bed sufficient relative elevation, without committing the serious error of ploughing too deep for the thin soil and barren sub-soil.

The form of the old beds would still be visible; but if their direction was across the new beds, their depressions would empty into the new furrows, and cause no difficulty. But if the old (and narrow) beds had the same, or nearly the same direction with the new, then the remaining depressions where the old water-furrows had been, would stretch along upon the new wide beds, and for the first crop at least, might be a disadvantage. But this would not continue long. The several cross and diagonal harrowings, proper to prepare the

land for corn, and to cover the planted seed, and afterwards for wheat seeding, will serve to reduce these inequalities, in two years' cropping, so that no evil therefrom shall occur afterwards, even if it had operated before. I have not, in practice, found any such ill effects but in few cases, and to very limited extent.

I have supposed the narrow beds to be raised by the (reversing) ploughing as high as the depth of the ploughing will afford, and to remain as high as the narrow base, and other circumstances will permit—and the wide beds only to be as high as one good ploughing will serve for, with the aid (if needed) of an extra furrow in, and a shovelling out of the water-furrow. This first operation will make the water-furrows about 6 inches deeper than could have been the old ones between the narrow beds. Of course, each of these new water-furrows, being both much wider and deeper than the old ones, must serve to drain better, if the higher-lying ploughed surface is in proper state to be drained—that is, not too flat, (or in hollows,) and also too retentive to permit surplus water to escape either by running off, or by filtration. The recent deep ploughing will generally permit abundant filtration, even if the surface of the bed is too flat for water to flow off every where. But the next succeeding ploughing, for the next crop, which will again "gather" and raise the ploughed layer, and again deepen the water-furrow, will make enough difference of elevation, and will shape the beds as well as may be desired. The subsequent ploughings should be so ordered as to keep the beds of suitable height. If deemed too high, or if water-furrowing is not required on particular parts of the field, the relative difference of elevation may be reduced by cross-harrowing, and not cleaning out the water-furrows afterwards.

The superiority, for drainage, of the new wide beds and deeper water-furrows, to the previous narrow beds with their five-fold more frequent but shallow water-furrows, (either kept cleaned out or not,) will be obvious to the eye, in the following profile views, drawn by the same scale, of an inch to the foot:

fig. 1.

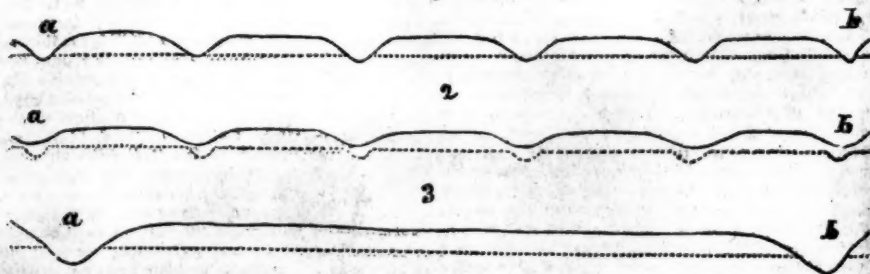


Figure 1. represents the profile or cross-section of 25 feet of land, (a to b,) ploughed in 5 beds. The ploughed layer, above the dotted line, is 6 inches deep; the water-furrows, cut deeper and swept out by the last running of the plough, are a little lower, say 2 inches, making the full height of the clean water-furrows, 8 inches.

Fig. 2. Similar beds, but with the water-furrows not swept out by the plough—or partially

filled again by subsequent tillage. This is the more usual state of narrow beds, after closing the tillage of corn, or the seeding of wheat or oats.

Fig. 3. A like width of 25 feet, ploughed in one bed of 15 inches elevation, measured from the crown, and general surface, to the bottom of the cleaned water-furrow. The depth of ploughing 8 inches.

These profiles would be enough to show the

greater draining operations of the wide beds, even if both surfaces, so shaped, were impervious to water. But, (as before described,) much greater is the difference, when we consider the permeable surface, capable both of absorbing and filtering water, in the one, is not elevated above any water standing in the water-furrows; and in the other, though the ploughed layer is deeper, and therefore lies lower, by 2 inches, it is still 7 inches elevated above the bottom of the water-furrows. In the narrow beds, (and much more in Fig. 2 than 1,) the ploughed surface acts to draw up and absorb all the rain-water remaining stagnant in the bottom of the water-furrows; while in the wide beds, any surplus water in the ploughed layer must filtrate into the deeper water-furrows, and either thence flow off, or, if remaining, will evaporate without again touching the upper loosened soil.

My experience (on a large scale) of wide bedding is but of a few years standing, though the operation has now been extended over nearly all the fields of my farm. Such limited experience is insufficient to enable me to pronounce decisively on the merits of so new a procedure. But to the extent of my experience, and the testimony of all who have begun the like practice, the benefits of this plan were not estimated by me too highly in advance of practical trial, nor in the more extended opinion expressed in this writing. Some of my neighbors, who are much better operative farmers and managers than myself, and whose lands (Pamunkey low-grounds,) are very stiff and retentive as well as level, have extended the width of their beds to 30 feet; and they deem that width more convenient for tillage processes, and not too much for proper surface drainage.

In putting a field for the first time into wide beds, desired to be permanent, it is very important that their direction shall be the best for effect and for convenience, and that the marking the places for the water-furrows shall be accurately done, and that the subsequent ploughing shall conform to the marking. There are several different important objects to be sought in the direction of the beds, all of which are rarely attainable in any one operation. These different objects are as follows: 1. That the water-furrows shall have some little fall in their course, so as to retain as little as may be of stagnant water after excessive rains: 2. That the course of the beds shall be parallel to the main ditch, or other open stream ditches—or, if that cannot be, to approach the ditch, into which they discharge their surplus water, as nearly as may be at right-angles: 3. If as proper in other respects, it will be more convenient for hauling crops from, and manure to the fields; that the beds shall be in the best direction for such hauling, which is at right-angles with the farm roads: 4. Straight beds should be preferred to crooked, because straight ploughing can be best executed; but this is not of enough importance to be allowed to conflict with the attainment of either of the other preceding and more important requisites.

It would not be worth the space which it would occupy, or the time and attention of my readers, to describe for instruction, and particularly my modes of marking off a field for wide beds, and ploughing the intervals. The important objects to be sought, after having fixed the proper directions of the beds, are that they shall be made as nearly of equal width, and the water-furrows as nearly parallel as possible. The farmer's continued attention to the

first measuring and marking the places of the water-furrows can scarcely be omitted with safety to the work. In my own case, I have found it indispensable personally to aid in and to continually superintend the first laying off of every field, without trusting to the laborers the measuring of a single distance, or the marking a single line. But when the land has been once correctly marked and ploughed in wide beds, no such subsequent care will be required. If the ploughman will merely not alter the places of the water furrows, he cannot otherwise alter the sizes and regularity of the beds.

WORK FOR THE MONTH.

As August is a month requiring action, we shall not expend any time in preliminary remarks, but at once proceed to state what ought to be done

ON THE FARM.

Seeding Rye.—For the plan of manuring and treating this crop, we refer to our article on its culture, in last month's journal.

Preparation of the ground.—After spreading the manure we recommended last month, plough it in deep, and pulverize the soil thoroughly by repeated harrowings, if necessary to reduce it to fine tilth.

Preparation of the Seed.—Soak it 12 or 24 hours in a brine, made from common salt, of sufficient strength to float an egg; then drain off the brine, spread the rye on the barn floor, and mix enough of lime with the seeds to coat them over and separate them; then sow them; never take more seed to the field any one day than you can sow and cover.

Quantity of seed per acre.—Sow 5 pecks to the acre.

Mode of sowing the seed.—Sow broadcast, and harrow them in, by two harrowings, one lengthwise the furrow, the other, crosswise. Make your water-furrows, so as to carry off all the surplus water, and finish by rolling with a heavy roller across the water-furrows.

Time of Seeding.—From the first to the middle of the month is the best time to seed rye.

Setting a Timothy meadow.—For every kind of information on this subject, we refer you to our "Essay on meadows and their management, and the culture of Grasses, &c.," published in our April and May numbers, in which all that is desirable to be known, is set forth,—but this much we will say,—he who expects a good crop of timothy, must either seed it in a soil naturally very fertile, or made so by liberal allowances of manure. It is a greedy plant, and can only prosper luxuriantly when grown where there is plenty of organic and inorganic manures.

Sowing Orchard Grass, and Kentucky Blue Grass.—For information upon this subject, we refer to the essay named above. These grasses are excellent for hay and grazing—timothy, for hay alone, as the after-growth is not sufficient to afford good pasture. Indeed, if timothy is left to perfect its seed before being cut, there is no after-growth at all.

Turnips.—If you have not yet sown your fall turnips, do so by the 10th of the month at farthest. For the preparation of the ground, manuring, &c., we refer to our last month's directions.

Late Potatoes.—Keep these clean. At the last working, broadcast over them at the rate of four bushels of the following mixture, to the acre. Mix 2 bushels of ashes, 1 bushel of plaster, and 1 bushel

of salt well together, and sow it over the potatoes while the dew is on the vines.

Ploughing for wheat.—Plough deep, thoroughly pulverize, and generally follow our advice in last month's journal, and you will not be far from being right.

Corn Fields.—See that these are kept clear of weeds and grass, and the soil open; but don't plough; the cultivator is the implement to be used in the corn field.

Fences.—Examine your fences with care, and cause all necessary repairs to be speedily made. In fact, the examination of fences should be a weekly matter; for as the grass of the pastures, in the woods, and by the road-side, get short, cattle, taught by the pinchings of hunger, are very apt to get restive, and look out for weak points of the fence of a corn field. The harmony between neighbors has often been seriously disturbed by the breaching of cattle; to prevent which, look to your fences and repair them.

Granaries.—Thoroughly cleanse and whitewash these before stowing your grain away therein.

Poultry Houses.—These should be frequently cleaned out, the hay, straw, and grass, of which the nests are formed, should be taken out and burnt, to get rid of the vermin, the nest-boxes should be cleansed with ley, and white-washed as well as the roosts and the interior of the house. Lime should be strewn over the floor. While we are upon the subject, we ask your indulgence while we jog your memory about the

MANURE OF FOWLS.—AND ITS VALUE.

"In connection with urine, the dung of birds, for instance, domestic fowls of all kinds, and pigeons, may be here mentioned. These animals discharge their solids, and what we may term their liquids, together. Their *urine* comes out combined with, or forming part of their dung. Now reflecting a moment on the nature of their food, strongly nitrogenous, being seeds, grains, &c., or animals, bugs, grasshoppers, &c., we can understand why their droppings are peculiarly rich in ammonia and salts. The strongest of all manures is found in the droppings of the poultry yard." Dana's "Essay on Manures."

Better authority than Dana, upon the value of manures, cannot be found from the rising to the setting of the sun. The opinion of such a man, thus strongly expressed, in favor of poultry dung, should influence farmers to save and utilize it.

The composition of the urine or white part of the dung, according to Coindet, consists of

Uric acid,	88.70
Ammonia,	8.55
Bone-earth,	2.75
	100.
Uric Acid consists of	
Carbon,	36.11
Hydrogen,	2.34
Oxygen,	28.19
Nitrogen,	33.36
	100.

Speaking of Uric Acid, Dana says:—

"It is not like the Urea, changed by exposure, into ammonia. It contains a large portion of nitrogen, which, under the influence of growing plants, is let loose, and may then form ammonia."

Now we hold it, that for all practical purposes, the nitrogen, in the uric acid, may be considered as

equal to so much ammonia, which we are taught to believe is the most enriching part of animal manures, and hence the great value of poultry dung.

We gave you in our May number, an account of Mr. Sumner of S. Carolina, having, in 5 months, saved 20 barrels of hen dung, and we are enabled now, through an article in the April number of the Albany Cultivator, to state, that Mr. Chester Moses, of Skaneateles, New York, who keeps a large number of hens for their eggs—keeping at times 600, 700, and 900 hens, makes as high as 300 bushels in a season! But we will let Mr. Moses speak for himself as to the virtues of this excellent manure:

"Mr. Moses considers the manure of his fowls of much importance, and takes care that it is all saved and applied to his crops. Under the building in which the fowls roost, is a cellar into which all the manure is put. In spring, a few weeks before planting time, the manure is worked over and mixed with plaster—sometimes with plaster and ashes in equal proportions—using enough of these articles to make the manure so dry as to pulverize thoroughly."

"This domestic guano, of which Mr. M. has sometimes the quantity of 300 bushels in a season, produces a profitable effect on the growth of Indian corn. His mode of applying it is, to drop a handful in each hill, which is then covered half an inch or more with earth, in order to prevent the seed from coming in immediate contact with the manure, which, experience has shown, would prevent its germination. Mr. M. stated that he had tried this compost in comparison with good hog manure, by applying each to corn in the same field and on similar soil. On one part, half a shovel full of hog manure was put in a hill, and on the other part, a handful of the hen manure compost. The crop was best where the latter was used, and the succeeding crop (which was oats,) showed the same result in favor of the hen manure."

"On another occasion he manured ten acres with the hen manure, which produced sixty bushels of corn to the acre. On a part of this piece, he used the manure only on alternate rows, leaving the intermediate rows with no application. The ears were 'mere nubbins.' He planted pumpkins on a row that had no manure, and on another row that had the proportion given to the rest of the field. The row which had no manure, had no pumpkins of any value; the other produced fifty-one fair sized good pumpkins."

Can any farmer, or planter, after such evidence as we have here produced, longer doubt as to the propriety of saving the dung of his fowls—nay, as to its being his duty to do so? We think not.

The best way to keep this manure through the season, would be to keep it in barrels or boxes in a cool place, to collect it, say twice or thrice a week, place it in the barrel or box, over the hen dung put a covering of mould, and over that a dusting of plaster. Kept thus, its volatile parts would be fixed, and the manure kept throughout the season without being impaired in its fertilizing properties. One barrel of hen dung, thus kept, if mixed with 1 bushel of plaster, and 5 bushels of ashes, would fertilize an acre of land sufficient to grow 20 or 30 bushels of wheat. We say then,—

SAVE YOUR HEN MANURE.

Thrashing out Grain.—So soon as you get through with your more pressing work, set to work with

will, and get your grain threshed and cleaned ready for market. Watch the rise and fall of prices, and send your's forward whenever the price will put a good heavy profit in your pocket. Place yourself early in a condition to take advantage of the market.

Stubble Fields.—Make a compost consisting of 2 bushels of salt, 1 bushel of ashes, and 1 bushel of plaster, and sow on each acre of your stubble fields. This mixture will destroy insects, improve the herbage, and add to the fertility of the land.

Pastures.—Make a compost for your pastures, consisting of 1 bushel of plaster, 5 bushels of ashes, 1 bushel of salt, 10 bushels of mould, and 1 bushel of bones; let it remain in pie a week, shovel it over well and sow it broadcast and roll. This quantity is for an acre. Just make the experiment, and the difference in its appearance, and that of the adjoining land, will astonish you.

Sheep.—Continue throughout this month to keep a trough in your sheep pasture, under cover, and to keep it well supplied with tar sprinkled over with salt.

Milch cows and two year old heifers.—If you have not a good bull of your own, secure the services of a full bred one for the use of your milch cows and 2 year old heifers. It may not matter much whether he be *Durham, Ayrshire, Devon or Hereford*.

Late Corn.—Press it onward, by the free use of the cultivator and hoe.

Accumulation of manure.—Make it a part of your system, from this until and throughout November, to employ a hand and team in the collection of the raw materials to compost into manures. The services of a hand, a span of horses and cart, will be more profit to you than will four horses and as many hands otherwise employed, on your farm.

In speaking of the physical properties of soil—of the value of mould, which is the *product* of compost heaps, Dana says:

"In reference to the electrical relations of soil, the dry sands are non-conductors, the clays weak imperfect conductors, they are in the negative state. *Geine* (mould) is always positive towards the elements of soil. In whatever view we regard *geine*, it is the basis on which rests the whole art of agriculture. It is this which causes the great difference of soil. It is a difference of physical characters. The chemical characters are uniform. If then *geine* (mould) is the soul of fertility, if it makes soil, hot, cold, wet, dry, heavy or light, the proportion in which it exists in soil, becomes an agricultural problem of the highest value."

Let us implore you, then, to collect every thing on your farm and form compost heaps out of it, in order that you may have something to give to your soil next spring, that will impart to it the life-producing principle—something that will impart to its electrical forces, positive powers.

Orchards.—It may be that you have neglected the trees in your orchard. If so, examine them, and wherever you discover the bark scabby, or mossy, scrape the bark of such trees, and paint the trunks of all with a mixture made of 4 parts *soft soap*, 1 part *flour of sulphur*, and 1 part *salt*. If there be any dead limbs on them, saw them off close into the bark, smooth the surface of the wound, which you should dress with a mixture made thus:—put equal parts of rosin, beeswax, and turpentine, into a skillet, melt it, stir the whole together, and, when milk warm, give the face of the wound two coats, then cover the wood with a piece of cotton cloth, or dust it over with sand.

Sprouts, Shrubs, Bushes, Briars, and Weeds.—Set a faithful hand to work to cut all these up. Let him collect them together in a pile, and, when dry enough, burn them. Attentions of this kind bespeak the careful, intelligent husbandman.

Draining Wet Lands.—This is a suitable period for such work, and the advantages to result from it are such as to enlist your interest. By draining your land, you will change its physical character. A wet soil which presents every appearance of an intractable clay, may, by draining, be converted into a pliant loam; for it is the excess of water which increases its cohesive powers: by draining, the superabundant waters are let off, and the soil improved in the whole round of its physical and productive properties: by draining such lands, a positive melioration of the health of the vicinity is brought about: by draining, lands which are incapable of producing any but the grosser kinds of vegetation, may be made to yield the very best. We say to you then,—*drain your wet lands*.

We thus conclude our hints for the month, by conjuring you not to forget, that the *making of manure* should be looked upon by every farmer, as a duty he cannot neglect without impairing the fertility of his land, and lessening his income.

WORK IN THE GARDEN.

Turnips.—If you desire a bed of turnips, select one with a deep loamy soil, spade in about two inches of half rotten manure the full depth of the spade, let your ground be dug in small slices, and well raked as the spading progresses. That done, spread on a like quantity of compost, formed of 7 parts well rotted manure, and 1 part ashes, rake this thoroughly in, then sow your turnip seed, rake them lightly in, sprinkle over them a mixture of equal parts of lime, soot, and plaster, and roll the ground.

The seed should be soaked 24 hours in fish oil, and drained in ashes, before being sown.

When the plants first come up, sprinkle them over with fish oil for several successive mornings, until they get into the rough leaf,—or dust them over, with soot, in the same way—the dusting must be done also in the morning, when the dew is on the plants.

Celery plants.—Prepare your bed for late celery, and set out your plants.

Asparagus beds.—These should be cleaned from weeds.

Spinach.—During the first week of this month, manure your beds intended for early fall spinach, dig in the manure, and rake well; then sow your seed in drills a foot apart. Towards the end of the month, prepare another bed, in the same way, and sow your seed; this latter bed, will afford you spinach for use early next spring.

Radishes.—Sow radishes, at intervals of a week, throughout the month.

Small sallading of all kinds may now be sown.

Peas.—Prepare a bed in the shady part of the garden, and drill in a few rows of green peas.

Beans.—Kidney beans, of all kinds, may be planted between the beginning and middle of the month.

Lettuce.—Set out your plants, and sow seed.

Endives.—Tie up your forward crop, and set out plants for a late one.

Cucumbers, melons, &c.—Keep the beds on which these grow clean of weeds and grass. In time of drought, give them copious waterings.

Herbs.—All herbs, for drying, should be cut while in flower, and dried in the shade.

Climbing beans.—Have your *Lima* and *Carolina* beans, carefully hoed. If the weather be dry, give them a watering, and continue your watering in times of drought.

Cabbages.—Have your cabbages well cleaned by the hoe, and see that they do not suffer at any time for the want of water: a few waterings with soap suds will be found grateful, and encourage their vigorous growth.

If you have plants yet to set out, seize the first occasion of rain to set them out, and don't forget, afterwards, that whenever the weather may be dry, they should be freely watered.

Weeds.—The careful, notable gardener, never permits weeds to grow, much less to go to seed in his garden. But, if through any cause, there be any flourishing in yours, have them all forthwith pulled up and disposed of. The most noisome weed will consume as much food as the delicious cauliflower, and, if permitted to mature its seed, will fill your garden next year with thousands of others. We say then, now is your time to exterminate them.

Budding of cherries, plums, &c. may be done this month, if the bark parts freely from the stocks.

Inoculation.—*Pears* should be inoculated in the early part of this month.

Apples, peaches, apricots, and nectarines, may be inoculated throughout the month.

Watering.—We desire to impress upon you these truths—If you desire your vegetables to grow luxuriantly, you must make free use of the watering pot, whenever the weather is dry. All vegetables take up their food from the earth in a liquid state,—therefore, unless there be water in the earth, they cannot feed, and, as a consequence, they will be stunted in their growth.

Potatoes.—Hoe your potatoes, and if you have not done so already, prepare a mixture of equal parts of *lime, ashes, salt, and plaster*, and give the vines, and the ground between the rows, a free dusting. Do this early of a morning, when the vines are wet with dew.

Theories as to the Action of Plaster.

The following condensed views of the theories entertained by various agricultural and scientific writers, we copy from professor James F. W. Johnston's "*Agricultural Chemistry*":

"According to Kollner, the action of gypsum depends upon the power possessed by lime to form with the oxygen and carbon of the atmosphere compounds which are favorable to vegetation.

According to Mayer and Broen, it merely improves the physical properties of the soil.

According to Reil, it is an essential constituent of the plant.

Hewig called gypsum the saliva and gastric juice of plants.

Humboldt, Girtaner, and Albert Thaer considered it as a stimulant by which the circulation is promoted.

Chaptal ascribes its action to a supposed power of supplying water and carbonic acid to plants.

Davy regarded it as an essential constituent of plants, because it acts only where gypsum is wanting in the soil, while other English authorities have supposed it to promote fermentation in the soil.

According to Liebig, it acts as an exciting power without mixing with the sap of the plant.

According to Liebig, it fixes the ammonia of the atmosphere, and,

According to Braconnot and Sprengel, it supplies sulphur for the formation of the legumin of the leguminous plants (the most probable view)."

"To the above extract," says professor Johnston, "I may add, that Mr. Cuthbert W. Johnson, so long known for his many valuable writings upon agriculture, in following out the above idea of Reil and Davy, in a recent paper on the use of gypsum, has stated that a crop of clover or sainfoin contains $1\frac{1}{2}$ to 2 cwt. of gypsum per acre, exactly the quantity which the farmers of Kent and Hampshire find it useful to apply to their grass lands every year. This statement affords a very simple explanation of the use of gypsum, and one which at first sight leaves nothing to be desired. But it proves too much, for it supposes the whole of the gypsum which is laid upon the grass or clover field to be removed year by year in the crop, and makes no allowance either for the quantity which must necessarily be carried off by the rains, or for that which must be sometimes at least laid on in the form of farm-yard or other similar manure. Nor does the result of analysis confirm the above statement as to the quantity of gypsum contained in the crop of clover or sainfoin. * * 1000 lbs. of dry hay do not contain, on an average, more than 4 lbs. of sulphuric acid—equal, supposing it all to be in combination with lime, to $8\frac{1}{2}$ lbs. of gypsum. Or a crop of $1\frac{1}{2}$ tons of hay contains the elements of about 30 lbs. of gypsum—only about a sixth part of what is usually added as a top-dressing to the land."

Having given the theories of European authorities, we will now state the views of some of the most distinguished scientific and practical men of our own country.

It was the practice of Col. John Taylor, of Caroline, Va., to mix 1 bushel of plaster with the farm-yard manure allotted to an acre, and although he makes no speculation—forms no theory—as to its action, he enables us to deduce from its practical effects, and from his manner of using it, that he looked upon it as a *conservator* of those portions of the manure, which, on decay, would become volatile and escape into the air. He says:

"My general rule is to deposit the loads, consisting of as much as four common oxen can draw, in squares at ten yards distant from each other, so that the extreme distance in spreading it, will be five from the centre of each heap. But this general rule admits of important exceptions. If the land fluctuates in fertility, the loads may be deposited at twelve yards distance, which is a good dressing; and if it is accompanied with gypsum the quantity to an acre may be diminished one-fifth in consideration of its aid."

"For some years I have used gypsum with the coarse manure of the farm yard, and I think it the most beneficial mode of using it. The manure carried out each day is ploughed in, before which one bushel of gypsum to the acre, ground fine, is sown on it after it is spread."

It is evident that the "*aid*" which Col. Taylor expected from the plaster, when mixed with his animal manures, was this,—the prevention of the ammonia from loss by evaporation, and its consequent appropriation to his crops. He was, to that extent, right, and his practice truly philosophical.

Mr. Madison, former President of the United States, in an address delivered by him before the Agricultural Society of Albemarle County, Vir-

ginia, May 12, 1819, in speaking of the powerful effect of Plaster, says:—

"The Plaster or gypsum, though not a manure within the farm itself, has been too long neglected as a fertilizing resource. It is now beginning to take a high and just rank as such. The proofs of its efficacy are as incontestible as the causes of it are obscure. The experiments of a very distinguished chemist, [Sir Humphry Davy,] led him to the opinion, that its substance enters into the substance of the plant. Without doubting the fact, it does not sufficiently account for the addition made to the size and weight of the plant, which greatly exceed the quantity of the plaster. It must, therefore, have some further mode of operating.— Whether it be by neutralizing some noxious ingredient in the earth, one of the modes by which lime is supposed to operate, or by *attracting and conveying to the plant, food from the earth, the air or water*, or by exciting the plant to a more active use of its feeding powers, whatever they be; or by its accretion and assimilation to particular parts of plants on which these powers depend—thereby augmenting and strengthening those particular parts, and enabling the feeding powers to give proportional augmentation to every other part; whether by any one or more of these processes, or by some others distinct from them all, the growth of plants be promoted by this mineral, remains, it would seem, to be yet explained."

It will be seen by the above extract, that though Mr. Madison was no chemist, yet his philosophic mind was able to discover, that Sir Humphry Davy could be only partially correct, that though the substances composing plaster, are found in the structures of plants, yet, from the smallness of the quantity applied, and which produced such large effects, it must perform other offices, than that of merely contributing its specific share, in making up the food of plants. Hence then, he started the suggestion, that it might operate by "*attracting and conveying to the plant, food from the earth, the air or water.*" This is but a suggestion on the part of Mr. Madison—probably, for want of a knowledge of chemical affinities, actions, and reactions, he could not, like Liebig, explain the *how*, yet it is such a suggestion, as might form the basis of that chemist's theory; for, in effect, it is substantially the same as his.

Dr. Dana entertains these views upon the action of plaster:—

"Suppose plaster or gypsum has been applied; the effects of a bushel of plaster per acre, or even the four-hundredth part of one per cent. of the soil produces effects on alluvial land, which show its good results, as far as eye can reach. It seems also incredible, that so minute a portion of a mineral can act at all, yet how beautiful is this result explained, by the principle, that plants decompose, first, this salt; the lime, for plaster is a sulphate of lime, then acts on geine, which is thus rendered soluble; while the acid, the oil of vitriol, or sulphuric acid, immediately acts on silicates. If silicates of alkali exist in the soil, we have now changed sulphate of lime for an alkaline sulphate, and if silicate of lime is also present, the potash or alkali, having been exhausted, plaster of Paris is formed anew. So long as there is in the soil organic matter, this action continues, and will continue till the plant has gradually withdrawn for its own use, the acid of the salt which was introduced."

"Fertility depends wholly on salts and geine.* Without the last there is no fruit formed; without the salts the geine is locked up, is insoluble. Consider now the application of this principle, that the base of the salts acts always in one uniform way; its action is wholly upon the geine; that the acid of salts, acts upon silicates. Apply this principle to all mineral manures, as they are called. They are all connected by one common mode of action of their base. There is no speculation, there is no mystery, as to the mode how they act. The effect produced by such wonderfully minute quantities, is no longer astonishing. It is no more wonderful than that leaven should make dough rise; it is even less mysterious."

Professor Norton says:—

"This manure (plaster) frequently produces a most beneficial effect when applied as a top-dressing upon pastures and meadows: it is also a favorite and excellent application to young corn and potatoes. It is of service not only by the valuable nutriment which it furnishes to the plant, but also from a certain power which it possesses of absorbing moisture and gases."

"Liebig has supposed that much of its effect upon grassland is owing to this property, that it attracts ammonia from the atmosphere, and retains it for the use of the plants. This is without doubt an important effect, but should not be considered as the principal one."

Dr. Daniel Ler, in the able address which he delivered, in October last, before the Hampshire, Franklin, and Hampden Agricultural Society, held these views:—

"An acre of soil one inch in depth weighs about 100 tons. The roots of clover descend from 20 to 30 inches in search of their appropriate aliment; and I have traced them to a greater depth. By estimating the mass of earth to the depth of only 20 inches as available for agricultural purposes, we have 2000 tons of soil and subsoil in an acre.— Now, so small an amount of gypsum as 50 pounds has added over 1000 to the clover hay grown upon an acre; and 100 lbs. have increased the crop more than 2000 lbs.

"Where did the matter come from which formed this immense gain in the wheat of the harvest?— 100 lbs. of plaster of Paris really contain a fraction less than 80 of lime and the oil of vitriol; the other 20 being what is called "water of crystallization."

As gypsum operates with marked effect on limestone soils in Western New York, where the use of lime alone does no good whatever, I am induced to regard the sulphur in this fertilizer as the element that really adds so largely to the growth of vegetation. Doubtless it will appear incredible to you that 18½ lbs. of available sulphur in 100 of gypsum, should cause the organization of some 950 lbs. of carbon, 800 of the elements of water, and 50 of nitrogen, attended by the extraction from the soil of about 150 lbs. of incombustible soluble salts. Whatever effect the sulphate of lime may have on the growth of a ton of dry clover, the above is not far from its composition. Clover is a plant that contains a good deal of sulphur; and salts having this mineral as one of their constituents, are extremely liable to be dissolved out of the surface soil by tillage and cropping. Thus, when sulphuric acid combines with magnesia, it forms Epsom salts. With soda, it forms glauber salts; with alumina

* Geine, as here alluded to, means mould.

and potash, it forms alum; with iron, copperas; and with lime, gypsum. Except the last, all these salts are well known for their ready solution in water, and it is obvious that they do not, as a general thing, abound in unmanured, cultivated lands. So long as the sulphuric acid lasts from its combination with iron, either as a sulphuret or sulphate, or with alumina, (the basis of all clay) liming will suffice to form gypsum in the soil; but after the sulphur is consumed, or nearly so, then gypsum, not lime, must be added to the soil. Similar remarks will apply to the use of bone dust, or burnt bones and lime. So long as phosphoric acid exists in the surface of the earth in combination with alumina and iron, the application of simple lime will suffice to form bone earth; but when this acid is measurably consumed, then bone dust, guano, or phosphorus in some other manure, must be applied to the impoverished land, to remove it."

Now then, let us review these several opinions, and see if we cannot, out of the whole, arrive at something like an *approximation* to the *modus operandi* by which plaster acts.

The theory of Kollner, offers no solution whatever, as to the action of plaster; it presupposes, that the whole effect of plaster is produced by the lime, which forms one of its constituents—plaster being composed of 33 parts lime, 46 parts sulphuric acid, and 21 parts water, in the hundred; and rejects altogether, any agency being exerted by the sulphuric acid. That this theory is unsound, every one will admit. If it were not, 1 bushel of lime would produce equal effects as a bushel of plaster,—and all know, that this is contradicted by the experience of every one who has used the two minerals. That lime exerts an influence, we do not doubt, but it is subordinate to that exerted by the sulphuric acid, whose influence is beyond all calculation. A bushel of plaster, which weighs but 89 6-13 lbs., as we have ourself seen, will increase the produce of clover *one ton* on an acre of land,—and we are sure, that there is no one who would dream of such result from many times the same quantity of lime.

To say, as Ruckert does, that "*it acts like any other food*," is but to advance an indefinite opinion, at best,—one which really discloses nothing, as to the *active properties* of the mineral; for if it only acted like other food, it could not produce such disproportionate results, as compared with the quantity applied.

The opinion of Mayer and Brown, are still more inconclusive, as it is impossible to produce any material improvement in the *physical properties* of a soil, with a bushel of plaster, the quantity of plaster usually applied to an acre.

The theory of Reil, and of Sir Humphry Davy, answers very well, as far as it goes. That it is "*an essential constituent of plants*," is a proposition too self evident to be denied. Every analysis shows its *presence*, and, if it were not essential, it would not be absorbed and assimilated by the structures and fruits of plants; but while such presence proves the fact of its being *ESSENTIAL*, it establishes *nothing* as to its *action*.

Helwig seems to have had a glimmering of the office performed by plaster,—he looks upon it as performing the same functions in the vegetable, as do the "*saliva and gastric juices*," in the animal system—that is, in facilitating and promoting the operations necessary to the digestion and preparation of the food. For ourself, we believe that such

is the case; but still he attempts no explanation, as to the manner, or as to the substances, upon which its agency operates.

Humboldt, Girtaner, and Thier concur, in ascribing to it, the powers of *stimulation*—and this doctrine has been held by many others. If they mean, simply, that it stimulates the plant, by the law of *presence—contact*,—without disposing bodies in the soil, to become food, then their theory must be considered as defective; because, in that case, it would stop short, in not furnishing any thing to the vegetable structure in the shape of food, either organic or inorganic, and no plant can grow and fatten on stimulation alone. There must be something more substantial than that. There must be something presented on which the plant can feed. The scent of a savory dish, while being cooked, may stimulate the human stomach to the enjoyment of a good appetite; but there its effect ceases—if the dish, when cooked, is not partaken of by the party whose appetite had been thus whetted, he derives no possible benefit from it. If the term had referred to the *substances in the soil*, as the bodies to be stimulated, or acted upon, and pre-disposed to become food, then there would have been some truth in the theory—some show of reason, as to the effects produced—as, in that case, an increase of food, would, necessarily, be the result. Without this presupposition, the doctrine of stimulation, must fall to the ground, no matter how ever respectable the authorities may be upon which it rests.

Chaptal's theory, in effect, clothes plaster with the property of attracting gaseous substances from the atmosphere, but as it stops short at that point, and makes no disposition of them after such attraction, it explains nothing which can give a resting place to the mind, as to what becomes of them after they are attracted.

Laubender's notion, is very similar to that entertained by Humboldt, Girtaner, and Thier; but restricts its action to the mere operation of *exciting*; denying to it the capacity of "*mixing with the sap of the plant*." If we were to admit his first proposition, we would have to reject his conclusion; for it is natural that any body competent to *excite*, would possess the power of entering into the "*sap*," as, without its *presence there*, it could exercise no exciting capacity, *presence* being essential to effect the suggested operation. But *theory* apart, his conclusion is contradicted by experience and fact; for we find both lime, and sulphuric acid, existing in, and forming part of, almost every plant; hence the elements of plaster, have the power, not only of "*mixing with the sap of plants*," but of assimilation also.

Professor Johnston, in his condensation of the theories entertained by the various European authorities quoted by him, was too brief in his notice of that of Liebig, and in order that we may not be instrumental in doing an act of injustice to one who has done so much to advance the science of agriculture, as has Baron Liebig, we will state his views at large, in order that they may be fully comprehended. These are his views:—

"The evident influence of gypsum upon the growth of grasses,—the striking fertility and luxuriance of a meadow upon which it is strewed,—depends only upon its fixing in the soil the ammonia of the atmosphere, which would otherwise be volatilized with the water which evaporates. The carbonate of ammonia contained in rain-water is decomposed

by gypsum, in precisely the same manner as in the manufacture of sal-ammoniac. Soluble sulphate of ammonia and carbonate of lime are formed; and this salt of ammonia possessing no volatility is consequently retained in the soil. All the gypsum gradually disappears, but its action upon the carbonate of ammonia continues as long as a trace of it exists." * * *

"The action of gypsum really consists in giving a fixed condition to the nitrogen,—or ammonia, which is brought into the soil, and which is indispensable for the nutrition of plants."

"In order to form a conception of the effect of gypsum, it may be sufficient to remark that 100 Hess. lbs. of burned gypsum fixes as much ammonia in the soil as 6250 lbs. of horse's urine would yield to it, even on the supposition that all the nitrogen of the urea and hippuric acid were absorbed by the plants without the smallest loss in the form of carbonate of ammonia. If we admit with Boussingault, that the nitrogen in grass amounts to 1-100 of its weight, then every pound of nitrogen which we add increases the produce of the meadow 100 lbs., and this increased produce of 100 lbs. is effected by the aid of a little more than four pounds of gypsum."

"Water is absolutely necessary to effect the decomposition of the gypsum, on account of its difficult solubility, (1 part of gypsum requires 400 parts of water for solution,) and also to assist in the absorption of the sulphate of ammonia by the plants: hence it happens that the influence of gypsum is not observable on dry fields and meadows."

"The decomposition of gypsum by carbonate of ammonia does not take place instantaneously; on the contrary, it proceeds very gradually, and this explains why the action of the gypsum lasts for several years."

This theory of Baron Liebig, is as beautiful as it is truthful, and shows the wisdom and infinite goodness of Providence, in providing so simple a means to render tributary to the earth, and to its products, the fertilizing gases of the air. But he does not go far enough. He circumscribes the action of plaster, to "giving a fixed condition to the nitrogen or ammonia which is brought into the soil." We admit with him, that ammonia, as one of the sources whence nitrogen is derived, is "indispensable for the nutrition of plants;" for we look upon it as among the most active principles, in giving animation to, and keeping in motion, the vital powers of plants. But plants require many other substances, beside ammonia, to ensure their healthful action, and enable them to elaborate and bring forth their structures and fruits, in vigor and perfection. We do not believe, that the action of plaster ceases, when it has transformed the carbonate of ammonia into a sulphate; nor do we believe, that the sulphate lies in a quiescent state, awaiting the voltaic action of the rootlets and spongioles of the plants, to appropriate it to themselves, as a part of their organic food. That a portion of it, is thus disposed of, we can very readily conceive; but may not a stronger base liberate another portion—free the ammonia from the sulphuric acid, and thus enable both the one and the other, to perform other offices? May not, then, the ammonia, as suggested by Dr. Dana, attack the fibrous matters in the soil, decompose and prepare them to become the food of plants? May not the freed sulphuric acid, perform a similar office upon the silicates, and contribute its mite, also, towards building up the

plants in their wholeness? We believe such to be the case. We know that ammonia,—indeed, that all animal—all nitrogenous bodies—are among the most active solvents of vegetable substances known. It has been demonstrated, that 2 lbs. of ammonia, is competent to render soluble 100 lbs. of inert vegetable matter, and hence we deem it fair to infer, that the ammonia, when brought into the earth, through the agency of the plaster and the rains, performs a more substantial part than has been assigned to it by Baron Liebig; and that once there, its action and reaction upon the convertible substances in the soil, will commence, and be carried on, and as the necessary result, that food for the supply of the wants of the plants, will, through its agency, be provided, and that the constituent elements of the plaster—lime, and sulphuric acid—will also perform their peculiar offices, rendering tributary, and preparing those bodies in the earth as food for plants, over which they exert a predisposing and controlling power—a power as wonderful and beautiful, as it is beneficial in results.—Without such were the fact—without the action and reaction of the ammonia, and the constituent elements of the plaster be thus continued, it would be impossible for them to produce the immense effects which, in practice, we every day witness.

Braconnot, and Sprengel, confine its operation to the supply of sulphur to the plant: That it does yield this supply, we freely admit, for the reasons before stated,—that such supply is essential, we also admit; but plaster, we think, carries its offices much farther, or its powers would be much less fruitful of results.

Professor James F. W. Johnston has been too cautious to give any opinion of his own, and appears to have contented himself, with attempting to demolish the theories of Reil, Davy and Euthbert W. Johnson. So far as regards the two first, he has failed; for there can be no question, but that both lime, and sulphuric acid, are essential constituent elements of plants; the latter author, however, having claimed too much—having attempted to prove too much—was more easily upset.

Having briefly stated our own views, in regard to the theories of European authors, we shall turn to those of our own countrymen.

Of those of Col. Taylor, and Mr. Moulton, we have already spoken, and have nothing to add.

Dr. Dana appears to have overlooked the offices performed by plaster on the surface of the soil—to have overlooked its powers of attraction, condensation, and fixation; but as far as we are competent to judge, he has gone far, very far, towards unraveling its ultimate action, and reaction in the soil.

Professor Norton concedes to plaster, the property assigned to it by Liebig, of attracting ammonia from the atmosphere, and of retaining it for the use of plants; but doubts, whether this should be considered as its principal power. If not its principal one, it is a most important one, as it places the ammonia in the soil, where its ultimate offices are so beneficially performed, in the way we have stated.

Dr. Lee looks upon the Sulphur, composing one of the elements of plaster, "as the element that really adds so largely to the growth of vegetation." That it does so, both directly and indirectly, is, in our opinion, beyond all question; but it performs other offices,—besides furnishing sulphur to the plant, directly—by its powers of attraction, it economises the ammonia of the air, through the laws of chemi-

cal affinity; then by aid of the rain safely deposits it in the soil, where its labors begin anew, in separating the silicates, and offering them up to the plants, as nutrition,—while the ammonia, not to be outdone in good deeds, goes to work, warms up the decomposable vegetable substances in the soil, and, by its persuasive action, decomposes and converts them into life sustaining food,—a similar service, to a more limited extent, we believe is performed by the lime separated from the acid,—and hence it is, that, by this action and reaction—by the direct and indirect power of plaster—by its capacity for attraction, and that of assimilating with some bodies, and inducing separation and decay in others, are the wonder working effects of plaster to be referred. Its powers are, at once, *direct, indirect, attractive, conservative, decomposing, and convertible.*—Editor of the American Farmer.

Guano and Plaster—once more.

To the Editor of the American Farmer—

It is customary after an engagement to review the scene of carnage, and count the dead and wounded.

It is reported of Gen. Taylor that, after the battle of Buena Vista, he said the Americans were at one time defeated, but they did not know it. Such may, peradventure, be the case with me on the present occasion. After a continuous fire from your batteries of 23 mortal columns, during which you have frequently, with an air of triumph marvelously resembling that of Santa Anna, boasted of your prowess and achievements, it would have been a miracle, and I should have been as invulnerable as Achilles, if I had escaped unhurt. I therefore confess to have received a few flesh-wounds, but having sustained no fatal injury, I must beg leave to reply to your summons in the language of the American commander, "General Taylor never surrenders."

The "noise and confusion" having subsided, and the smoke passed away, I will now report the extent of my injuries. It gives me pleasure therefore to state, and I do it with all candor—and as gracefully as I can—that you have shown the Sulphate of Ammonia to be a more valuable article than I thought. That it is in some cases an active fertilizer, producing excellent results, I admit you have clearly established. I profess to be ever ready to bow to the majesty of truth, however it may conflict with my preconceived opinions.

But even with this admission, permit me respectfully to enquire whether you have yet fully met the issue between us? The original question was, whether guano is better alone, or combined with plaster? I endeavored to maintain the one, and you the other. From facts which had come to my knowledge, I went so far as to condemn the mixture as always injurious, while you advocated it as always beneficial. It now appears that it is not always deleterious. With this abatement then, the main question still recurs—which is, on the whole, the most eligible mode of using guano,—whether unadulterated by admixture with any foreign substance, or in combination with plaster? In other words, whether the sulphate or the carbonate is the most "grateful form" in which ammonia can be presented as food for plants?

Adhering still to my original position that guano cannot be improved—that any attempt to do so is like gilding refined gold, or painting the lily—I

now proceed to review, as briefly as I can, the course of argument you have pursued throughout the 23 columns of rejoinder in the last number of the American Farmer. If I was to extend my review to a length proportionate to that which your 23 columns bear to my 3, I should occupy about 175 columns of your future numbers; but if you will allow me the use of only two or three, I think I can say nearly all that the occasion requires. The remaining 170 odd I will relinquish to your own occupancy.

But first, since you charge me with disingenuousness, let me point out one or two instances of your own manliness in conducting the argument. "T. S. F. is so kind as not to have the least objection to our proving the truth of our position. This is certainly most generous and condescending in him," &c. "Our correspondent applies them (i. e. ammoniacal manures) but in such a way as to let the substance furnishing the nitrogen to the plants, take an aerial excursion, that it may be brought back to the earth in the dews and rains, but it furnishes no security that in its descent it will return to the same soil whence it ascended." * * * "His (mode) involves a heavy expenditure, and offers but an equivocal assurance of resulting profits." In another place you speak of "gaseous exhalations," &c. in the same kind of connection.

I now submit to our readers whether the Editor's own language in another place is not equally applicable to such effusions as these, as to any thing I have said. I shall not make the retort, but I will quote it for the purpose of reminding him of it. "Men who feel themselves cornered in an argument, sometimes use such means to divert the attention of the bye-standers from their own pitiable condition; but the man of manly, ingenious heart never resorts to such clap-traps." Now I propose to the editor to let us have done with all such trifling and puerility as this. I can laugh at his wit, though at my own expense, as heartily as any body else, but such personalities are wholly unbecoming. It was not I who commenced them, unless questioning the correctness of his opinions, uttered in a most authoritative manner, is to be deemed a personality. I thought, perhaps erroneously, that if a cat may look at a king, an American farmer might surely be permitted to look in the face of an editor without believing in his infallibility.

And since we are touching on matters of taste, may I ask why you indulge in such boastful language throughout the whole of your 23 columns? and not only there, but also in an editorial notice of your labors, wherein you say that the article in question will be found "conclusive on the subject"—and that it is a "complete text book on the use of manures of almost every description." It is not usual for great men thus to herald their own fame. Gen. Washington did not so; neither did Gen. Jackson nor Gen. Taylor. I recollect only one notable exception in the person of Gen. Santa Anna.

But a truce to all cavilling and quibbling. All the liberty I shall henceforth take will be to play occasionally on some of your words, which shall be done in such a manner as to constitute no just cause of offence. I understand you then to condemn the application of guano without a "fixer," as "involving a heavy expenditure, and offering but an equivocal assurance of resulting profits." You strenuously object to its being applied in such a

manner as to be taking "aerial excursions" in the form of "gaseous exhalations." Well now, I don't advocate these "aerial excursions" myself, but is it in reality given to such flights except in the imagination of the writer? As far as my knowledge and observation extend, nine-tenths, if not ninety-nine hundredths of the guano used in this part of the country is without any "fixer" at all. The same may be said, though perhaps to not quite so great an extent, of the guano used by the farmers of Sandy Spring. And yet I have never heard of an individual complaining of its taking aerial excursions and descending on any other land than their own. On the contrary, every body is speaking of the marvellous effects of guano on their crops this spring. By common consent it is admitted to transcend any thing ever before witnessed, inasmuch that many who have heretofore been scoffers, are now convinced of its value. How then can you undertake to assert that such applications "offer only an equivocal assurance of resulting profits"? Could guano have attained its present exalted reputation, if the only unequivocal assurance of resulting profits had been derived from that portion alone which has been mixed with plaster? Why, I will venture to say, that not a fourth part, nor a tenth part of the guano that has been used in the U. States or England, has ever been treated with plaster. As far as I have any reason to know, it is mostly amateur farmers—the so called scientific farmers—who are afraid of these "gaseous exhalations" and aerial flights; but the great body of plain, practical, strong-minded farmers dread no such fantastic doings, and are perfectly satisfied with the combination which is effected between the guano and the soil;—and with the "resulting profits" too.

Now let us consider the ingenuousness and hospitality with which you entertain the facts I introduced to your notice. The case of Tho. E. Blount seems to be rather perplexing. By way of breaking its force you say "the land was of the very poorest kind." Well, that is precisely the kind of soil on which we prefer to use it, for it makes the most barren almost as productive as the most fertile. "There may have been some inorganic substances wanting in the soil"; or "the volatile elements may have been impaired by exposure"; or "the season may have been adverse to a fair result, as guano and plaster both require water to prepare them to become the food of plants." Now mark the dilemma in which you are placed. You were completely estopped from having recourse to the "gaseous exhalations"; but you assign reasons "as plenty as blackberries," which are altogether suppositious, to break the force of a fact which militates against your theory. Why, my friend, you are worse than an eel: there is no grasping you. I have treated your facts with the most profound respect, and shall continue to do so. But if you explain all my facts away, and insist on yours being implicitly received, it does appear to me that the reciprocity is all on one side. If this is what you mean by "ingenuousness," I confess to a very dull apprehension in my estimate of it hitherto.

But speaking of "volatile elements," let me ask you a question. You say I have a great facility at asking questions, but you need answer none that are not pertinent. This, however, I consider very pertinent. What has prevented the escape of these volatile elements on the guano islands, where the deposit is so ancient as to be almost a geological

formation, and where the natural increment has not amounted to more than half an inch, or an inch a year?

Amongst other evidence which I quoted, was the—"opinion" as you term it—the *decision*, as I should designate it—of the Farmers' Club of Sandy Spring. If this had been simply an opinion, and not a conclusion arrived at by those who had evidence to justify it, it would have been entitled to no more respect than the opinion of any other intelligent men. It appears to me that it would have been more "ingenuous" if you had accepted this fact also as it was offered—as the judgment of men founded on experience.

The results of experiments made by R. R. M.—and W. J. T.—showing the ill effects of combining plaster with manure, you despatch very summarily. We will let that pass without comment, but why should you remember to forget the very important fact reported by the latter gentleman, that "he had tried plaster with guano about 4 years since—and the consequence was an almost total loss of the guano—while that applied without plaster had a good effect." Your passing it by was, I have no doubt, an oversight; for surely the ingenuity which could account for Tho. E. Blount's failure, could have neutralized the force of this fact also.

But perhaps the most remarkable procedure of all is the unceremonious manner in which you have appropriated my last fact to your own use. For so doing, I am far from wishing to accuse you of violating one of the commandments, but I really must reclaim this property as belonging to myself. Now what are the merits of the case. Three lots are seeded to oats and clover. No. 1 had plaster and guano, equal measures. No. 2, one measure of plaster and two of guano. No. 3, guano alone. The quantity of guano applied to the whole piece was 522½ lbs.—an equal quantity on each lot.—The land, from the description given, seems to have been as poor as Tho. E. Blount's. "The oats on No. 3, on which guano alone was put, was *much better* than on either No. 1 or No. 2." The next year, the clover on No. 1 was high enough to cut. Subsequently, that is, this year, the difference was less marked. Now I will relinquish this fact to you only on one condition; and that is, that you shall account scientifically, and of course consistently with your own theory, why the crops of oats and clover should have been "*much better*" on No. 3 than on either of the other lots—and that too for the space of two years.

Let us now proceed to examine the evidence you have introduced with such a flourish of trumpets, to establish your own position and demolish mine. You will recollect that I asked for facts, and not for authorities—for bread and not for a stone.—Theories alone are of the smallest practical value, as you have shown in the case of Liebig. Now, what has been your course of procedure? Why, you have furnished us with a host of speculations and authorities, with a very sparse collection of facts; a bushel of chaff with a few grains of wheat; a mountain in labor bringing forth a mouse. You quote the authority of Col. Taylor, and Prof. Norton, and Dr. Gardner, and Prof. Mapes, and Edward Stabler, and Baron Liebig, and many others—all very distinguished names, I readily grant; and yet you adduce only about three, or at most four "facts" of any particular value (you do not attempt to enumerate but five)—leaving out the English tables, to which I will refer by and by.

This then is your series of "best-attested" facts which you spoke of two months ago as being in your possession! Why, one might suppose that when you were marshalling them in array, some of them were absent on "excursions," and had not returned. And now, what do these facts amount to? They all go to show that the mixture of plaster and guano has been beneficial—that it has produced good results, perfectly satisfactory to the cultivators. All this, as I said at the outset, I most cheerfully admit. I shall not attempt to wrest one of them from its legitimate bearing, but shall accept them all for precisely what they purport to be, just as I would a bank note or a coin. What I complain of is that you had not gone a step farther. Why have you not produced some facts showing the comparative results of guano, and guano and plaster, side by side—facts which would enable you not only to justify the practice which you applaud, but to condemn the one you reprobate? Now if this is the course of procedure—and if we are respectively at liberty to establish our positions by one-sided facts,—why, with a little industry and a little concert, I could collect thousands and tens of thousands of facts to prove the great value of guano alone. I hope my friend will recollect what he has said about "aerial excursions" and "gaseous exhalations"; how that he has charged me with advocating a practice "which offers only an equivocal assurance of resulting profits"; and then contemplate the impotent conclusion at which he has arrived. After all his research and ingenuity, I think it must be obvious to our readers that he has signally failed to redeem his pledge; and that though he may have succeeded in showing that sulphate of ammonia is valuable in the cases he cites, and by consequence in many other cases, yet he has not succeeded in proving that it is better or even as good as carbonate of ammonia.

As to the editor's authorities, he cannot object to my disposing of them in the same manner in which he has dismissed my friends of the Sandy Spring Club. "As a body of intelligent gentlemen, they are not to be excelled in any part of the country, and we would respect their opinions on all scientific questions as much as we would the opinions of any other gentlemen whatever." I believe it has generally been conceded that what is sauce for the goose is sauce for the gander.

A word or two now in reference to the English tables. They seem to be selected for the purpose of showing the superior virtue of sulphate of ammonia over every thing else except guano. Only in one short table is guano mentioned at all, and then in comparison with rape-dust, very much to the advantage of the former. The first table exhibits various results of sulphate of ammonia, combined with wood ashes, some of which are striking and others not. But the third is something of a curiosity. We are furnished with the relative products of farm-yard dung (71 pecks)—nitrate of soda (99)—sulphate of magnesia (91)—sulphate of ammonia (107)—sulphate of soda (64)—silicate of potash (120). Such is the witness called by the editor, and he is bound to abide by the nature of the evidence. And what are the conclusions at which he would have us to arrive? Why, that farm-yard dung is about the most worthless of all these applications; that saltpetre (for such it is in effect) is 40 per cent. better than dung; that Epsom salt is 30 per cent. better; and that Glauber's salt is very nearly as good!! Such are the preposterous

extremes to which we are conducted by these so-called scientific applications. But I do not wish to be misunderstood. I have already said, in my last communication, that the achievements of science have been almost angelic. But this sort of charlatany which goes under the name of science—which ignores all that we farmers have learned in the practical school of agriculture—which gives the preference to Glauber's salt over farm-yard dung, and saltpetre over stable manure—deserves to be scouted for its impudent pretensions. No wonder that book-learning is so often odious, even to sensible men.

Passing in review then the several facts which have been submitted on either side, it appears to me that all the editor's success consists in having reduced them to his own imaginary standard. He has taken the bed of Procrustes and forcibly stretched his own facts to correspond to its length, while he has lopped off mine, sometimes at the head and sometimes at the feet. Under such treatment it would be no difficult task to make a man disbelieve in his own identity.

Amongst other weapons, the editor has resorted to anecdote. If he had correctly related the one he has cited, I should have been well satisfied with the application; but as he has not done so, I propose to offer him one in a more authentic form, which he will find in Hume's History of England. The Stuarts were very much cramped in consequence of the limited supplies of parliament. A courtier of Charles the First (I think it was) presented the king with a coat, having a pocket of very capacious dimensions on one side, and a very small one, not larger than a fob, on the other. Charles asked for an explanation. "Sire," replied the courtier, "the large pocket is to hold the loyal addresses of your subjects, and the small one their subsidies." Now with all respect for the editor, whom indeed I very highly respect and esteem, I think such a coat would be very convenient to him. The larger pocket might be used for his speculations and authorities; the smaller one for his facts.

I might say a great deal more,—but I must hasten to a close. But I will take occasion to express my regret for having used any term which the editor could regard as disparaging to him. I allude to the expression "farthing rush-light." I disclaimed all offence, and really intended none, as I stated at the time; but having used the word "luminary" in reference to Liebig, the greatest master of chemical science the world has probably known, the simile required an antithesis. "Lesser light" would have answered my purpose, and none could have objected to it. All chemists are lesser lights compared to Liebig, and that was my meaning, whatever might have been my form of expression. But the editor has repaid me amply; for he has with untiring perseverance badgered me through nearly every paragraph of his rejoinder. That, however, produces no degree of pain at all to be compared to what I feel at being supposed capable of wantonly inflicting a wound upon him. I hope he will perceive nothing in this that can be considered in the least offensive. If there is now and then a little pungency, there is at least not a particle of acrimony.

And now I ask permission briefly to return my acknowledgment to "Patuxent Planter"—or, as he pleasantly styles himself, "P. P. P. P." I feel obliged for the information he has furnished, and would endeavor to answer his numerous enquiries

if space permitted, notwithstanding he has stepped out of his way to have a fling at me for my heresy on the plaster and guano question. But he has made atonement for this in the very kind manner in which he has given me "advice" to "take Time, Study, and Practice my theories." For this I would gladly render him any service in return. But first, I must relieve myself from the imputation of having presumed to "advise" him. That is a part I never volunteer to act towards anybody except my children; and least of all would I offer to advise a stranger, and that stranger so capable of giving good advice as "P. P." All that I did was to "venture to suggest" a transposition of terms, since "P. P." had obviously made the rule the exception, and the exception the rule. I don't see by what ingenuity, short of that of my friend of the American Farmer, a suggestion can be transformed into advice.

The analysis which "P. P." has furnished, presents a soil of peculiar character. The proportion of sand, 97¼ per cent. nearly, is an unusually large amount, and indicates something nearly akin to a sand bank. The carbonate of lime, only the 9-100th part of one per cent; the 7-100th part of one per cent. of magnesia; and the 5-100th part of one per cent. of phosphoric acid, show a great deficiency of those important constituents. Now, from this diagnosis, it appears to me that almost any physician might give an intelligent prescription. I will venture to furnish two.

1. Take of magnesian lime 50 or 75 bushels, to be followed in one or two years by from 10 to 20 bushels of bone dust, per acre. This, I am convinced, will work a radical change.

2. From such a constitution of soil, it is very obvious why guano should fail to act. There is nothing, that I can discover in the analysis, with which guano can combine—not even a trace of organic matter. It imbibes during the day a great amount of solar heat, and radiates it rapidly during the night. Guano, applied to such a soil, speedily parts with all its "volatile elements." In the sudden radiation which takes place, it ascends in the form of "gaseous exhalations," and takes "aerial excursions," never again descending in the dews of heaven to the place from whence it arose. I would therefore very confidently recommend the liberal application of SULPHATE OF AMMONIA. This prescription is offered, after consultation with my friend of the American Farmer, whose views, I am convinced, are no longer fanciful—at least in cases of idiosyncrasy like this. Whatever confidence I may have in the first mentioned treatment, yet I can more confidently propose this, since the old adage teaches us that "two heads are better than one," &c.—(mine of course being of the secondary order.)

In conclusion, I respectfully request the editor of the Farmer to admit this reply into his July number, instead of keeping it over a month longer to add another supplement to it. He has already written 23 or 24 columns, while I shall have occupied only some six or seven after the publication of this. I do not at all expect to trouble him with anything farther on the subject. In making this request, he will surely not suspect me of deprecating any thing he might have to say. The simple expression of an editor's opinion very often prevails against the argument, and even facts of his opponent. But we have now, perhaps, both of us written enough. If the readers of the Farmer have

accompanied us in our discussion, they will have felt no difficulty in comprehending the point at issue. If they have felt any interest in it, some of them will no doubt be incited to subject the matter to a practical test. That is precisely what I want: I think I may venture to say, what we both want. If any considerable number of them will report the results of comparative experiments, with some description of the character of their soils, we shall have an amount of evidence sufficient to put the question at rest. I look forward to its settlement in no other spirit than that of a lover of truth. In that spirit, if the weight of testimony is adverse to the position I have occupied, I shall rejoice that I am rid of one more error; if in favor of it, it will excite no feeling of triumph. As to all personal considerations, they are only as a drop in the bucket—as nothing—compared to the importance of the truth. T. S. P.

Petersburg, Va., June 9, 1851.

Note by the Editor of the American Farmer.

As we have already sufficiently explained our reasons in our "*Suo-Rejoinder*," for differing in opinion with "T. S. P.," upon the subject upon which we have been at issue, and believe that we sustained our position, we deem it unnecessary either to repeat them, or to restate our arguments, and facts. Those reasons, arguments, and facts, are in possession of our mutual readers, and as we have cause to be satisfied with the impression they have produced, we are content.

In discussing the matters involved, from the deep interest manifested, we deemed it due to the agricultural community, to cover the whole grounds of the controversy, in order that there might not be left a loop-hole on which to hang a doubt; and having accomplished our purpose, we have no further wish to gratify; but in courtesy to our esteemed friend and correspondent, we shall answer a question which he propounds, that appearing to us the only thing in his communication requiring a reply. He asks:—

"What has prevented the escape of these volatile elements on the guano islands, where the deposit is so ancient as to be almost a geological formation, and where the increment has not amounted to more than half an inch or an inch a year?"

Our reply to the above question shall be brief. We answer then, *that it was the want of moisture.* No rain occurs where these deposits exist in Peru; hence there can be no fermentation—no putrefaction—moisture being a condition necessary to convert the nitrogenous matters of the guano into ammonia,—and, consequently, owing to its absence there can be but little, if any escape of "volatile elements," because, for the want of moisture, they could not form.

The Peruvian farmers understand this principle well. The moment they have applied and dug the guano into the ground, they let loose their sluices, irrigate their fields, and thereby supply one of the essential conditions of decomposition—the heat of their climate furnishing the other. Thus they ensure the efficient action of the guano. This application of water, is repeated throughout the growth of their crops. Experience has taught them, that, without the aid of water, rich as is their guano in all the constituents of fertility, it would remain almost as inert as so much brickdust, that element being essential to prepare their manure, and put it in a condition to be taken up by the roots of the

plants. To irrigation then, as much as to the guano, the Peruvians are indebted for the products of their infertile soil and arid climate.

A word or two more and we shall leave the brave old chief to wear his war-plumes with whatever grace he may. The writer of the "Sur-Rejoinder" neither wrote, nor advised the writing, of the paragraph calling attention to it, and is, therefore, not accountable for it.

PLASTER AND GUANO.

To the Editor of the American Farmer.

In your last issue I notice this remark in "T. S. P.'s" article on "Guano and Plaster." "In other cases—as in those of T. E. Blount and W. J. T.—the mixture may have lain for several days before it was spread on the land"—I trust Mr. Editor, that I am not so improvident a farmer as to permit any fertilizing matter which I have labored to accumulate and prepare—and especially that for which I have expended capital which might have been more profitably laid out, to lie "for several days" exposed "before it was spread on the land." My practice has ever been to cover all fertilizers as fast as they are spread, and never permit them to lie exposed for six hours, if possible to prevent it—for I am among that number of agriculturists who believe that manures lose by evaporation. On the other hand, the mixture was made in the field in a large box, and only a bag mixed at the time, the box being sheltered by a sheet whilst the mixture was being made;—it was thus regularly spread by two men, and covered by four ploughs running immediately after. As my letter has been "the cause" of the matter in controversy, and has been cited among the "facts" showing the deleterious effects of plaster on guano, I will attempt to atone to you by giving another which may be cited "in order to show" the beneficial effects of plaster on stable and barn yard manure. It has been my universal practice for the last seven years, to use gypsum regularly in my stables during the year, using it freely in composting stable, barn yard, hog pen, and sheep manures, and I have yet to say, that plaster ever acted deleteriously on the above named manures. In 1847 the supply of plaster fell short, and being exceedingly busy hauling out marl, it was inconvenient for me to obtain a second supply from Petersburg—consequently I put up five compost heaps without plaster. The heaps were composed of (I here mean the entire number of compost put up) the above named manures:—mould from the margin of the Black Water River, a strong solution of salt and plaster, excepting the last five heaps, which contained the same ingredients and the same quantity.

March 10th.—Laid off 20 acres of land to be manured for corn.

March 13th.—Finished hauling manure on said 20 acres.

Remarks.—On five acres of the above land the manure was applied with which no plaster was mixed, but composed of a mixture of stable and barn yard manure composted with mould and a strong solution of common salt.

June 22nd.—Laid by this lot of corn—the fifteen acres to which the manure was applied containing plaster is somewhat ahead of the five acres on which the manure was applied with no mixture of plaster.

Oct. 28, 29, 30.—Cut up and shocked corn on 20 acre lot, preparatory for seeding wheat—one acre of each laid aside for measurement.

Nov. 16th.—Housed corn from the 20 acre lot—The acre on which the manure was applied with plaster returned 11½ barrels 3 baskets of good corn; 1½ barrels of inferior—The acre to which the manure was applied without plaster, returned 10½ barrels of good, and one of inferior corn.

The above notes are taken from my "day book" and farm recorder—books that I have regularly kept for seven years; and it is now a source of pleasure, and in many instances of profit to turn back and examine the records of the past. The above experiment actually grew out of the supply of plaster falling short—and a proposition of my overseer—"suppose we make an experiment with this manure that has no plaster with it, we can then see whether or not the plaster does any good." Accordingly the experiment was made—the result I have faithfully given you.

"First in order, is that of the Hon. Thomas E. Blount;"—why bestow this title?—there is but little honor in heading a legion of unsuccessful experiments. When I purchased the guano it was my intention to have applied it to a different piece of land, but at the suggestions of a friend who advised me to apply it on the land from which this enormous crop of corn, was taken in 1847, viz: ½ bushel per acre, "that the land being very poor, he thought it would be giving a fair test to the experiment, and if it should be successful, others in the neighbourhood would be thereby induced to apply it to their land"—Accordingly I yielded. You are right in saying "there may have been some inorganic substance wanting in the soil." The soil was nearly destitute of inorganic matter, having been in cultivation some 65 or 70 years, and being distant from the homestead, had never received any application of manure, to the knowledge of an aged neighbour, from the time of its being cleared, to the application of the guano.—Taking possession of my farm in 1843, my attention was turned entirely to the improvement of soils suitable to the raising of wheat. This land being too light for the profitable culture of that grain, I had determined never to make another crop on it after the crop of 1847. I have instituted a new class of experiments with guano and plaster this spring, on the cotton crop, on two different kinds of soil—to determine whether or not plaster affected guano deleteriously. In regard to stable, farm pen, hog pen, and sheep manures, seven years experience in the liberal use of plaster has perfectly satisfied my mind. The result of experiments on cotton, pumpkins and water melons this spring, I will give you next winter if you desire it.†

Jan. 6. 1851.

T. E. BLOUNT.

*If an enterprising farmer is not entitled to the appellation, who is?

† We should be highly pleased to receive accounts of Mr. B.'s experiments.

GUANO AND PLASTER.

To the Editor of the American Farmer—

You are discussing a most important point in agriculture, while guano continues so largely in use, as to whether it is injurious or otherwise to mix it with plaster before sowing. I trust those of your readers who have experience in the matter, will come out under their own signatures, so as to let us judge of the weight of authority, and let us all have the benefit of it. For my own part, I have used guano and plaster in almost every form (and with

some very extraordinary results, such for example, as finding no benefit from the application of guano dissolved in water, upon wheat or grass applied in April.) I have used the guano pure, broadcast on wheat, and harrowed in, in the months of February and March,—ditto mixed with plaster and harrowed in at once,—ditto ploughed in pure,—ditto mixed with plaster, charcoal and alluvial earth, part of which remained mixed, and covered the heap with an inch of plaster, for a month, then sown and harrowed in, and lastly mixed and ploughed in. But such is the difficulty of giving accurate results from those farm operations which are not intended as experiments, that I can't be confident in giving you any precise difference in these various modes. I am confident however in the efficacy of mixing plaster, charcoal, &c. with guano before using—it is with me an experiment that has been tried, and the result known. The field on which this mixture was sown two years ago, showed the benefit at once on the wheat, and continued to show it on the grass (clover and timothy) till they were turned under last fall for wheat. Your correspondent T. S. P. seems to differ from the above. I therefore give it you as a fact, so far as my experience goes,—let others come forward and give theirs, either pro or con,—what the public wants is the truth;—it can only be got at by facts—mere theory will not do it; as witness Liebig's failure, happily quoted by T. S. P.

In conclusion, as I am writing very hastily, just on the point of leaving home, the result of my experience in the use of guano for the last seven years, is in full accordance with a common sense view of the matter, viz: that though a greater temporary effect may be, and I think generally is produced on wheat by the application of pure guano, yet I feel entire confidence that the result of the harvest, as well as the after crops of grass, will prove decidedly in favor of an abundant mixture of absorbents with the guano before using it.

One more remark:—T. S. P. seems to think the combination formed by the mixture of guano and plaster will be in a great degree insoluble. I can only say, without a goodly portion of rain, I have found all manures fail—guano, stable manure, and plaster, &c. with it! Old Mother Earth, a more subtle chemist than Davy or Liebig, will dissolve pure *silex*, and give it to the wheat stalk.

Yours in haste,

Jackson, N. C.

H. K. BURGWIN.

A PRAISEWORTHY PROPOSITION.—We take pleasure in calling attention to the subjoined communication. The proposition it makes could not fail to be productive of great good, and we, therefore take occasion to commend it to the favorable consideration of every corn-grower in the Union. Such struggles are as generous in conception as fruitful of beneficial results. The writer says he can guarantee some 40 contributors from his section.

SWEEPSTAKES FOR CORN.

CAMPBELL STATION, TEN., May 12, 1851.

To the Editor of the American Farmer—

For a year past I have been reading your journal with much interest. Farming, for some time, has been my occupation, and, as a natural consequence, I feel a deep concern in every thing connected with the branch of business that I expect to follow for a livelihood during life. In this section of country we are greatly behind the age, or at least behind

other sections in agricultural improvements. We lack system and economy—we lack science and the improved implements of husbandry—in a word, we lack the valuable information contained in your periodical. Notwithstanding, we are making much improvement in our farming operations; our system of farming and mode of treating the soil and crops have been materially changed in the last ten years. Our great fault has been, and still is, that we cultivate too much land, and pay too little attention to its improvement. Some of our farmers plant one hundred acres of corn, and feel well satisfied if they crib 2000 or 2500 bushels, from soil originally good, when in fact I am convinced that an equal amount can be gathered from one-fifth of the land, with the same labor and expense, differently employed. Now, if this be so, the folly of planting large crops and exhausting our best soils, for the want of adequate labor and manure to keep it equal to or above its virgin fertility, must be obvious to all. Although I have myself farmed on the large crop principle, I am so thoroughly convinced of its impolicy, that I now want to make a proposition (the chief object of this letter) through your journal, to completely test the capability of one acre of ground to produce corn. I wish to make the proposition as broad as the Union itself, or at least to embrace every corn-growing district in it, so that every variety of soil and climate, every fertilizing agent, and every mode of treatment, may be brought into requisition, and the result made known. If one acre of ground will produce two hundred bushels of corn, or upwards, why cultivate ten acres to obtain the same? And if this amount can be made, is it not a fact important for the Union and the world to know? All must answer that it is. I then propose that every man who wishes to try the experiment upon one acre of ground, will, by the first of October next, forward to the editor of the Farmer his name, accompanied with two dollars in cash, to be awarded as a premium to the man that succeeds in raising the most. If one hundred engage, the sum will amply pay the successful man; if one thousand, the chances will be increased against him, but the increased reward will increase the exertions—so the greater the number the more thorough the experiment. If you favor the project, please give it such notice as you may think it deserves, with proper comments, &c. I have not, as yet, felt satisfied that a sufficient interest can be elicited to make the experiment thorough and complete, by engaging farmers from all the corn-growing districts in the Union in the contest, but I am so forcibly impressed with the matter, and feel so confident that a large number will engage, that I have no reluctance in making the proposition.

The proposition would not be complete, if each competitor were not required to give his success, properly authenticated, with the kind of soil, the kind of manures used, the mode of treatment, &c., for the object in view is not merely that the successful man may enjoy the honor and reward of his success, but that a substantial benefit may accrue to the country, by throwing light upon the culture of one of its greatest staples.

Respectfully,

W. W. W.

A correspondent at Vienna, Md. says:—

"I have tested by actual experiment 'whether wheat will turn to darnel,' and am satisfied it will not."



BALTIMORE, AUG. 1, 1851.

TERMS OF THE AMERICAN FARMER.

\$1 per annum, in advance; 6 copies for \$5; 12 copies for \$10; 30 copies for \$20.

ADVERTISEMENTS inserted at \$1 per square of 12 lines, for each insertion. In case of the continuance of an advertisement for six months or longer, a liberal deduction will be made. Address, SAMUEL SANDS, Publisher.

At the State Agricultural Society Rooms, No. 128 Baltimore st. over the "Americau Office," 5th door from North-st.

MARYLAND STATE AGRICULTURAL SOCIETY.

The regular quarterly meeting of the Board of Managers will be held on the first Wednesday in August, (the 6th inst.)—It is very desirable that a full attendance be had, as it is the last meeting prior to the Annual Exhibition, and business of importance will be brought before the Board.

By order SAM'L. SANDS, Sec'y.

We have several communications on hand, which will be attended to in due time.

NEWS OF THE CROPS WANTED.—The editors of papers with whom we exchange, will confer a favor by collecting and publishing reliable information as to the produce of wheat, corn, rye, oats, cotton, tobacco, and hemp, the present year, and what relation these several crops bear to those of former years.

OUR CALL upon subscribers who had overlooked their indebtedness to the Farmer, has been promptly responded to by a goodly number—others who have failed to notice our appeal, we have, tho' reluctantly, "cut their acquaintance"—there are still "a few more left," of the "same sort," which we have retained on our list a little while longer, having reason to expect that a settlement will be had within a reasonable time—they are no doubt like the writer of the annexed, hailing from Caroline Co. Va., which we publish as a sample of many others received of the same tenor:

"I can truly say with your correspondent of Loudon, Va. that it is certainly not the amount that has made me so backward in forwarding you my subscription for the Sixth Vol. of the Farmer, or that 'I have enough of it,' but the cause which he assigns, and I will add, that of neglecting the Golden Rule; of doing to others as we would they should do to us; but I believe you will make all due allowance for the frailty of poor fellow man; therefore hope I shall not be too hardly dealt with for my negligence of duty.

"You will receive enclosed two dollars, to pay for the 6th and 7th Vols. of the American Farmer, as I am always glad when it makes its appearance at my house."

VIRGINIA AND NORTH CAROLINA.—Our friends in both these states are laying us under heavy obligations to them by the zeal with which they are urging our "Farmer" upon the attention of their neighbors. In Eastern Virginia particularly, and in the Old North State, the most lively interest has been aroused, and we are daily in the receipt of additions to our list—and, although not yet to the same ex-

tent, the same interest is being excited in the Western part of the Old Dominion—A friend in Loudon who has been making efforts to induce his neighbors to subscribe, assures us, that our journal is gaining on the consideration of the farmers of that county, and adds:

"I hope shortly to find it the useful occupant of every farmer's fireside in our section of country—Push on then in your laudable design, and be not discouraged; you are certainly accomplishing great good to agriculture in our section, and I feel assured that you will, as you deserve, reap a rich reward before long."

Shinney Pea—Alabama.—A subscriber at Mobile, of this State, who has sent us the names of sundry subscribers, writes us as follows, under date of June 18: [Another list has since been received.]

"I have set out with the determination of getting you a subscriber for every one of the Shinney peas sent me (say forty.) The peas are now ripening, and by continuing to plant as fast as they mature, I shall make enough to distribute them pretty generally, and the condition shall be, subscribe to the "Farmer." Now is the time with us to plant our old native Cow or Horse pea—a good pea enough when planted at the proper time—but while my neighbors are *planting*, I am *eating* the Shinney peas, and from last season's experience, I am convinced they will continue luxuriant and fruitful until killed by frost."

Agricultural Clubs and Societies.—A subscriber in Va. asks us for a copy of the Constitution of one of our Clubs, and some information as to the best mode of conducting such an association—his object being to form a club in his neighborhood, where some of the farmers are anxious for its establishment. We would feel much indebted to Mr. Hollday, Col. N. Goldsborough, Mr. Hambleton, or some of the other members of the Talbot Clubs, to favor us with the desired information, as it would no doubt be of extensive service in aiding in the formation of clubs in various other quarters. We cannot find a copy of such a Constitution on record. We would also be obliged to any friend who would furnish us with a copy of a Constitution for a regular County Society.

SUSSEX CO., DEL.—We have received from the Club in this county a list of subscribers to the Farmer, which is usually forwarded every year. A meeting of the Club was held at the house of Wm. C. Polk, Esq. at Bridgeville, on the 19th June, where the members were highly entertained with the view of a very superior stock of farm animals, such as Devon Cows, and working Oxen, Horses and Swine. A friend who was present writes us, under date of 24th June, that "after partaking of a most superb dinner, wine, &c. prepared by Mr. Polk's lady in the very best style, in which she is very proficient, we took a stroll over Mr. P.'s corn and wheat fields, which give promise of an abundant yield, notwithstanding the very cold and dry season with us. We severally are trying to improve the agricultural product of our several estates, by the aid of the numerous instructions we find in the American Farmer. Some of our farmers are commencing harvesting their wheat, the crop being abundant and in good order. Gov. Ross has started his wheat mowing machine, which works admirably well."

"THE FARMER"—We should do injustice to our feelings were we to withhold the expression of the gratitude of our heart for the many evidences of kindness which we have received at the hands of our agricultural friends during the past month.—Could we devote the space to the publication of the extracts from letters received since the first of June, we could fill almost a sheet with the testimonials of our patrons, as to the great good which is being accomplished through the medium of our journal, and the high estimate in which it is held by the writers and their neighbors.—These evidences of approbation, and the solid tokens with which they are accompanied, in the shape of renewals in some cases for several years in advance, and the addition of new names to our list, are well calculated to stimulate us to increased efforts, if possible, in the good work in which we are engaged.—We will, we hope, be pardoned, for the selection of the following, which breathes the sentiments uttered, by we may say, hundreds of others, of the appreciation of our labors, and the effects thereof on the welfare and prosperity of our City and State.—And tho' we may subject ourself to the charge of vanity in so doing, we will not refrain from the expression of the opinion, that the effects of our labors are not less influential for good upon the prosperity of our city, than they have been upon the agricultural community.—We feel conscious, that through the means of our journal, directly or indirectly, the trade and commerce of this city has been very materially extended.—But our space is too precious to permit us to indulge in the reflections which the subject is calculated to engender.

The writer of the accompanying note, is the distinguished ex-editor of the Washington Globe, but who, for a number of years past, has retired from active political life, to the calm pursuits of agriculture, on his beautiful "Silver Spring" farm in Montgomery Co. Md. where, no doubt, he enjoys more solid comfort and happiness, than when, at the head of the official organ of a most popular and powerful administration, thousands and tens of thousands of his countrymen watched with the most intense interest, for the effusions of his gifted mind.

SILVER SPRING, 8th July, 1851.

DEAR SIR:—I enclose five dollars, which will pay in advance some years subscription to your paper. I congratulate you on its success, for it marks the improvement of the country. In my opinion, it has added a dollar an acre to the lands of those who have read and applied its precepts.—If the impulse it has given to agriculture in Maryland, should increase in progress for years to come as it has done during the last eight years, the State will be the garden of America, and what a debt will it owe you! The city of Baltimore will not owe you less, for the rise of the prostrate energies of the state will impart a commensurate vigor to the arts, manufactures and commerce of the city. I am glad to see the city sensible of this, and extending liberally its encouragement to the State Agricultural Society.

Yours,

F. P. BLAIR.

Virginia.—Many letters from the Old Dominion, of similar import to the following, have been recently received, with the cash for the writers' subscription, and that of others.—It is dated Petersburg, July 1:

"I have, at the close of each year since I have been taking the work, had it nicely bound, and

would not take for it ten times its cost. My farming operations are upon a small scale, (being engaged in the mercantile business, in which I have been engaged for the last 25 years,) but feel great encouragement from the yearly increase of my crops of wheat, corn, &c., together with a decided improvement in the land cultivated. The crop of wheat in this section is very fine, better than for several years past. Wishing that your subscription list to the volume that commences this day, may be doubly increased before the close of the same, with the assurance that I will do all in my power to promote it, I am

Very truly yours,

B. T. H."

The Old North State.—A subscriber in Pitt Co. N. C. sends us a list of new subscribers, which he accompanies with the following remarks:

"I have taken and been a constant reader of the American Farmer for the last three years, and can say with the utmost confidence, that no periodical within my knowledge can call upon the farming interest for patronage, with more propriety than yours. Old prejudices you are doing away; our farmers are waking up to their true interests, and I hope and believe a new era is dawning upon us; and nothing is better calculated, in my humble judgment, to push it onward, than a full and free dissemination of the "Farmer." It is a strange fact, but not the less strange than true, that although agriculture is the basis of commerce, trade, and all other branches of industry, by which means civilization, the arts and sciences, have made such rapid strides for the last half century—yet at this moment there is no other occupation or profession so far behind the age—none that needs so much light, and none that holds out greater inducements for a well directed exertion on our part.

I hope to be able by the next volume, to show you that we appreciate your efforts in this old "North State" of ours.

H. S."

EARLY CUTTING OF WHEAT.—A correspondent of King George Co. Va., under date of 1st July, writes us as follows:

"We are about through harvest; some of us who are not willing to ply the sickle until the wheat is "dead ripe," are still in the field. The farmers around expect a more than ordinary return from the quantity seeded. I took the advice of Mr. Ruffin, and cut my wheat early. Some of my neighbors predicted that I would not be guilty of a like folly again—"you have a good crop," said they, "you had better not throw it away." But I knew what I was about—it was no experiment with me; I had frequently experimented before on a small scale, and so far from disapproving of the plan, I only regret that I was not sooner made aware of the loss that I had been sustaining. When I commenced my harvest, and for several days after being in it, there was no shattering of grain, but about the winding up, vast quantities might be seen scattered over the field and around the shocks. It is now raining heavily, wheat full ripe, and those who laughed at my folly, are in a fair way of being laughed at in turn.

M. W."

Early Fruit, &c.—A subscriber in Wilmington, N. C. in remitting his subscription to the present volume, remarks, that he had been enjoying "Early York" and "Grosse Mignonne" Peaches for a week, from his trees.—His letter is dated 4th July.

GREAT SALE OF LAND IN VIRGINIA.—We refer our readers to the advertisement of *Robert B. Bolling, Esq.* of Petersburg, Va. offering at public sale, a number of Tracts of Land in Eastern Virginia.—There has probably never been such a large body of naturally fine land purchasable in that section of the State, and the opportunity is worthy the attention of capitalists, speculators, and farmers desirous of procuring land, easy of cultivation, with means of fertilization abundant, (being within the finest marl regions of the State,) and facilities of markets unsurpassed. It is a fine wheat growing region, and the lands of this gentleman are famous for their great fertility. Farmers from Maryland, Pennsylvania, Delaware, New Jersey and New York, have for years been making settlements in the vicinity of this estate, and it is a rare opportunity for those who wish to obtain farms, to suit themselves.—There is no doubt in our mind, that the States of Maryland, Virginia and Delaware, and portions of Pennsylvania and North Carolina, are to be among the permanent wheat districts of the country, and the evidences which are this season presented as to the capacity of our land for improvement, by the use of marl, lime, and guano, demonstrate that those who wish to purchase landed estates, cannot find a more sure and profitable investment, than is presented even in our poorest lands.—We venture to say, that lands which have heretofore been considered worthless, and thrown out of cultivation as beyond redemption, have this year, been brought into play in Maryland and Virginia, and made to yield more wheat than an average of either Ohio or Michigan, and at an expense probably not greater than is required to cultivate a similar quantity of land in those and other states, supposed to be the best wheat growing districts.—The valuable and continually increasing markets which are presented in the District cities, and Norfolk, Richmond, Baltimore and Philadelphia, are, by the means of numerous navigable streams and rail roads, brought to the very doors of our farmers—our climate is unequalled, and the healthfulness of our position will be found by an inspection of the census returns, to be inferior to no other section of the country.—Lands have risen in value in many sections of Maryland, Virginia and Delaware, nearly a hundred per cent. within the last 5 years, and the prosperous, happy and contented condition of the people, are sure evidences of their onward march.

NOTES TO CORRESPONDENTS.

Top-dressing for grass.—The best top-dressing that "C. C. B." could give his grass, would be 4 bush. of bone dust, 4 bushels of unslaked ashes, and 1 bushel of salt, per acre. These substances to be formed into pie and remain for two or three months before being applied; to be kept under cover, and occasionally shovelled over.

Application of Guano.—"M. W." of King George Co. Va. is informed that it will be best to apply his guano before fallowing, and plough it in to the depth of the furrow. The guano to be mixed with one peck of plaster to each hundred pounds.

Banks of Streams.—"Q. B." of Orange, Va. is informed that it is conducive to health, and conservative to the banks of streams, that a belt of trees or bushes should be suffered to grow thereon. A belt of from four to six feet in depth, will be sufficient for both purposes.

Half burnt oyster shells.—"R. T. M." of St.

James, S. C. is informed that he can advantageously apply his "half burnt oyster shells, mixed with lime and broken up," at the rate of 50 bushels to the acre, to his "old fields on which there is a heavy coat of broom grass." We would plough the ground deep, harrow it, then apply the half burnt shells, and harrow them in well.

Manuring Strawberries.—"A. W." is referred to an article in this number on the culture of the strawberry.

The best plan for him, will be to divide the manure he intends to top-dress the strawberry plantation with—give one-half this fall when he cleans his beds—the other half next spring, so soon as the frost is out of the ground. It will be best for him to mix a peck of plaster with each hundred weight of guano he may apply—to work it in lightly with the hoe, and then rake.

Strawberry vines require to be generously fed, but they may be fed too much. 100 lbs. of guano and 1 peck of plaster will be sufficient to dress an acre of his plantation. It should be the object of a strawberry grower, never to let his vines suffer for the want of water from spring until the fruiting is over. In early spring we have derived great benefit from watering with soap suds.

LIME—ASHES—SETTING A PASTURE—COMPOSTING WOODS—MOULD, &c.—H. J. B. C. of Pleasant Hill, N. C. is informed that it is possible his lands may not need liming; the deep ploughing he speaks of, and the consequent turning up of some inches of the subsoil, may have furnished not only lime, but potash, phosphoric acid, and other inorganic substances. From the character of the subsoil he speaks of, we think it more than probable that it contained all of these constituents.

The 5 or 6 acres that he contemplates clearing up and draining for a pasture, would be materially benefitted by a top dressing of 20 bushels of ashes to the acre. We should prefer ashes to lime. The market value of leached ashes here, is 10 cents a bushel—unleached ashes bring about 12½ cents per bushel, the soap boilers being at the expense of collecting them from house to house. About ½ of ashes consists of lime, naturally, those sold slaked by the soap boilers, contain frequently ½ lime, as they use lime in leaching them.

The best plan to form composts out of his "woods-mould, and leaves and stalks," would be to mix with every two loads of these substances 1 load of stable or barn-yard manure. If he has not the latter, he should spread over every load of the former 2 or 3 bushels of ashes, make them up into heaps, layer and layer about, and let them remain 5 or 6 weeks in warm weather, occasionally turning them over. A bushel of salt and one of plaster to every 20 loads of the compost would add greatly to its value.

The 5 or 6 acres which he contemplates cleaning up and draining may be converted into a pasture without ploughing, by harrowing two or three times before seeding his grass and clover seeds.

GUANO ON RED LAND.—A friend from Virginia, in writing to us, makes the following postscript to his letter:

"I have been somewhat disappointed at the discouraging results of the application of Guano to red land, on which farm-yard manure has already been used."

We are unable to account with certainty for the "discouraging results" named by our correspondent. We cannot divine that there is any antagonistic principle existing in the elements usually found in

"red lands" and the constituents of *guano*; nor can we conceive that the previous application of "barn-yard manure," could have militated against the efficient action of the former. It may be, the application of the barn-yard manure supplied the soil with a sufficiency of the nutritive principle—that its nitrogenous elements were competent to afford all such substances required by the healthful growth of the plants, and that the soil did not need the addition found in the *guano*. This is merely suggestive on our part. But, if our suggestion be correct, our correspondent need not despair of ultimate benefits from the *guano*, as the power of cohesive attraction possessed by his red lands, will husband the ammoniacal compounds of the *guano* for the use of future crops. If his "red land" be very stiff, its texture may have tended to delay the decomposition of the compounds alluded to, but he may rely upon it, that tillage and the voltaic action of the plants which he may hereafter grow upon it, will ultimately utilize the virtues of the *guano*.

MARLING AN OLD FIELD.—A subscriber in Surry Co., Va., under date of 21st June, writes us thus: "I have an old field that is grown up in pines, that has not been cultivated for 25 or 30 years, which I want to clear and marl, and would like to know the best way to apply marl, and the quantity per acre."

We would advise the application of 100 bushels of marl per acre, and that it be spread evenly over the land as soon after the pines are cut down as possible; the sooner it is thus placed the better. It would aid its action on the soil, if it was harrowed in together with the pine shatters. This operation would encourage the decomposition of the latter, and bring their virtues earlier into play.

Curing Clover Hay.—A correspondent at Charlottesville, Va. says:

"If it be not presumptuous in a young farmer, I would suggest an improvement in Mr. Ruffin's instrument for curing clover hay; it is to have the pointed stick shod with iron, and to have an iron band around the upper end, with a light maul; a boy can make the holes and place the sticks very fast—the butt end serves as a light rammer if the hole should be too large for the stick. W. D."

BENEFIT OF DEEP PLOUGHING EXEMPLIFIED.—In the Patent Office Report for 1849-'50, we find the following paragraph illustrative of the value of deep ploughing:

"As a general thing, the soil must be *deepened* before it can be perfectly improved. One acre of soil 12 inches deep is worth more to make money from, by cultivating it, than four acres 6 inches in depth. Thus, admit that a soil 6 inches deep will produce 14 bushels of wheat, and that 12 bushels will pay all expenses and give 2 for profit. Four acres of this land will yield a net income of only 8 bushels. Now double the depth of the soil and the crop, making the latter 28 bushels, instead of 14 per acre, and the former 12 inches deep in the place of 6. Fifteen bushels, instead of 12, will now pay all annual expenses, and leave a net profit, not of 2, but of thirteen bushels per acre."

Hard to Beat.—James L. Martin, Esq., of Talbot Co. Md. cut six tons and two hundred pounds of hay—orchard grass and clover—from a lot containing but one acre and a third.

A subscriber sends for the Farmer for his friend in Prince Edward Co. Va. "beginning with the last number—I consider the article on the culture of wheat alone, worth the whole year's subscription—send them on immediately."

Fine Honey.—R. Barnes, Esq. of Charles Co. has presented to the Editor of the "Times" a dish of honey of very superior quality—The honey, Mr. Barnes says, was taken from a hive on Mr. T. P. Stabler's plan published in the "Farmer" of April 1850, page 358, without the destruction of a single bee—Mr. B. speaks in strong terms of the value of the hive, and advises its general adoption.

Extensive sale of Stock.—The sale of blooded stock, &c. at Mt. Fordham, N. Y. the residence of L. G. Morris, Esq. took place on the 24th June, agreeably to announcement. The prices obtained were considered fair, and the successful bidders appeared well pleased with their purchases. A large number of animals were purchased by Mr. D. Foley, who it is understood, was purchasing for Gen. Cadwallader, of Philadelphia, we suppose for stocking his farms in Maryland—Our friend, A. Clements, Esq. of Philadelphia, we observe, was also the purchaser of a number of animals—We hope both of these gentlemen will make a part of our coming Fall Exhibition with their purchases.

Ploughing Match.—A very exciting Ploughing Match, under the direction of the Valley Agricultural Society, took place on the 6th of June, near Charlestown, Va. The Judges furnish a very interesting report of the contest, and express their gratification at witnessing "such a turn out from all the surrounding counties, and from our sister state of Maryland."—They awarded the premium to Wm. Koons, of Jones' Cross Roads, Washington Co. Md., for his 2 horse plough. We hope to find room for this report.

A Ploughing Match is to come off 1st Aug. at Jones' X Roads, Washington Co., Md., by the "Manor Agricultural Association" of Washington Co. Md. Hon. J. Dixon Roman, is to deliver an address on the occasion.

Important Improvement.—The Columbia (S. C.) Carolinian says, that a gentleman of Alabama has invented a machine, which he has had in *successful* operation for two months, which he alleges will plant and cultivate cotton with about *one-fourth* the usual labor to a man and horse, and which does the work much neater and better than the usual way. When we obtain a description of the machine we will publish it in our pages.

Agricultural Interests.—The Washington papers say that the Navy Department, with a view to add to the agricultural interests of the country, has issued special instructions to the East India squadron to procure and send, or bring home, rare plants and seeds, particularly of the sugar cane and tea plant, adapted to our climate and soil, and useful for domestic purposes. The increasing difficulty experienced for the last two or three years in keeping good seed canes for plants, has induced many of the planters to try the introduction of new varieties.

Reaping Machine.—During the past year, Mr. James R. Brooking, of this town, has manufactured and sold twelve of Hussey's Reapers at \$100 each. Numerous certificates state that they give general satisfaction, and are readily adapted to mowing timothy, and cutting clover designed for

seed. Mr. Brooking's Machine shop is near the depot, where he expects to make an increased number of reapers for the crop of next year.—*Western Virginian.*

Sheep and Wool.—The Fredericksburg News says. The clippings from the imported sheep of our friend Major James B. Corbin, of Caroline, have been made for the present season. The samples sent us are beautiful specimens. Eighteen pounds of clean wool were taken from his buck. It is certainly unlike any we have ever seen—being more like silk* than wool. An Oxford ewe yielded 12 lbs. of similar wool—a Cotswold, 1 year old, 10 lbs. The Major tells us that all the lambs he has have been sold at \$20 and \$50 each, and the demand is greater than the supply. The weight of his buck is, we learn, 345 lbs.

The Providence Journal notices a new variety of sheep, a ram and a ewe, just imported from Africa, and intended to be conveyed to the fine sheep farm of M. B. Ives, Esq. at Potowomut. It says:

"They came from the mountains, about 300 miles in the interior, from the E. coast of Africa, and were a present from H. B. M. Consul in Zanguebar, to a gentleman in Salem. The variety is entirely new and quite unknown to naturalists! It is distinguished by the enormous fatness of the tail, and a singular dewlap, resembling that of cattle, and the absence of horns in the ram." The wool is represented to be very coarse, but the mutton unrivalled in flavor and tenderness.

*How is this—the sheep named are of the coarse wool breeds?—Ed. Am. Farmer.

†About the beginning of the present century, Gen. Eaton, then our Consul at Tunis, sent a present of broad-tailed mountain sheep, to the late Timothy Pickens, then Secretary of State, which we presume were identical with the present importation. A particular description, as well as plates of them, may be seen in the *Memoirs of the Philadelphia Agricultural Society*. These were *African* sheep, coarse woolled, but excellent for mutton.—Ed. Am. Farmer.

The *Montgomery Co. Md. Agr. Society* held its quarterly meeting in June, and elected the following officers:—A. B. Davis, President; Vice-Presidents, Otho Magruder, Z. Waters, H. Trundie, Robert Dick, and F. P. Blair; Executive Committee, Geo. E. Brook, N. S. White, S. C. Veirs, Jos. T. Bailey and R. J. Bowie; W. Veirs Bouie, Recording Secretary; Jas. W. Anderson, Cor. Secretary, and Robert W. Carter, Treasurer. The Society have issued their list of premiums for the Fall Exhibition, an abstract of which will be published next month.

The "*Southern Planter*," published at Richmond, Va. owing to the lamented death of its late talented editor, will in future be edited by Frank G. Ruffin, Esquire, of Albemarle county, Virginia, a gentleman who is said to be eminently qualified to conduct it. We sincerely wish the *Planter* may receive a generous support. It is due to the ancient commonwealth, that a journal devoted to her agricultural interests should be well sustained. The resources of the state, both agricultural and mineral, are vast, and need only to be developed to make the mother of states, and statesmen, stand on that vantage ground! to which she is entitled by her unflinching patriotism, and the high intelligence of her sons; and we are sure that the *Southern Planter*, if well supported, would do more than a yeoman's duty, in sustaining the great interests of the state.

MEASURES OF SURFACE—OR HOW TO MEASURE AN ACRE.—As the time is at hand, when our patrons may be laying off their experimental plots of ground, we have thought it would save them trouble if we were to place before them a table of distances, each of which would include an exact acre. The usual course with most farmers is to step off 70 yards each way for an acre, but this gives 4900 square yards, and as there are but 4540 square yards in an acre, there is an excess of 60 square yards, as determined by the above rule. And as accuracy as to quantity of land, should always be sought in every experiment, we have calculated the following table of distances, each of which contains an exact acre:

A plot of ground		5 yards wide, by 968 yards long, contains 1 acre	
10	"	484	"
20	"	242	"
40	"	121	"
80	"	60½	"
70	"	69 1-7	"
220 feet	"	198 feet	"
440	"	99	"
110	"	396	"
60	"	726	"
120	"	363	"
240	"	181½	"

Editor of the American Farmer.

The Talbot, Charles and Prince George's Societies have issued their lists of premiums for the Fall Shows, which will be noticed more particularly in our next.

WHEAT AND TOBACCO CROPS.

WEST RIVER, Md., June 19, 1851.

MY DEAR SIR:—I have the honor to enclose \$2, to pay my year's subscription to the American Farmer, now due; and the coming year for Mr. Clifton Markoe, of Vera Cruz, for the next year, in advance. He paid last year in advance, through me. You will please to send him the Farmer, as usual, directed to "*Hartman Markoe, Esq., New York.*"

I commence my wheat harvest to-day, being mainly induced to do so by the sound and able views of Mr. Ruffin, in the last Farmer, which are to a very considerable extent confirmed by my own observations. Another reason is, that my harvest is so extremely heavy, I shall not be able to secure it, unless I begin very early. I have never known such a prospect for wheat, which is now out of danger from our great enemy, rust. We seldom suffer, in this region, from any other cause. In other respects, our agricultural prospects are indeed gloomy. We have had no rain for a long time—the springs are drying up, and the ground is scorched with drought. The corn is suffering for the want of rain, and heat, and the tobacco crop is almost hopeless. Very few of our farmers have planted more than about one-fourth of their proposed crop—1st, for the want of early plants; and 2d, for the want of seasons this month. The plants have grown and declined without the farmer being able to set them in the ground. Under these circumstances, I regard it as impossible for us to make anything like a fair average crop. How it may be in other parts of the State, I do not know, but suppose not much, if at all more favorable.

Very truly, your obt. servant,

GEO. W. HUGHES.

ON THE ANALYSIS OF SOILS.

To the Editors of the *American Farmer*—

GENTLEMEN:—In the May number of the *Western Agriculturist*, I notice a communication signed Dr. M. Gross, which it is said by the Editor is intended as a criticism on my analysis of a certain sample of soil.

I wish to make the following extracts from Dr. Gros's "criticism"—the basis of some remarks on dormant and active constituents of soils.

1. "As the chemist understands in soils under 'Bases insoluble' the silica only, the question 'arises'—what Dr. Stewart means by 'bases that remained undissolved with sand,' if not the basis 'of silica alone?'"

2. "The soil contains water and organic matter '10.07'—we never met with a correct analysis of 'soils in which the water is mentioned as a constituent of the soil itself,' &c. &c.

3. "As the quantity of iron and alumina 17.70, 'is enumerated together, what reason has he, (Dr. Stewart) for the denial of the presence of 'Phosphates. It is far easier to separate Iron and 'Alumina, than to discover minute quantities of 'Phosphoric acid."

Dr. Gross commences his "criticism" in a paragraph marked "No. 1," by professing his ignorance of the terms used by some of the best chemists in the world in stating analysis of soils, and other special quantitative analyses.

In the paragraph marked No. 2, he expresses his ignorance of what are called by chemists, a special quantitative analysis.

In the 3d paragraph, he asserts that all chemists who, in stating an analysis, give the weight of the Iron and Alumina together, are evidently unable to separate them.

He then takes it for granted that he has proved that I do not know how to detect Phosphoric Acid when combined with Alumina, or I could have succeeded in detecting it in the soil, and then proceeds to prove, by calculating the weight of an acre of soil, that no one can estimate the proportion of Phosphoric Acid, Sulphuric Acid, or any thing else in a soil.

Now, Messrs. Editors, it is well known that a very few educated men are capable of judging with regard to chemical analysis, and the public must necessarily lose confidence in the application of Chemistry as a means of diagnosing the defects of soils, if the Editors of papers permit such ad captandū essays to pass unnoticed among the people.

The writer of this paper, I suppose, never performed a chemical analysis of any kind, and he has fallen into the error which most novices embrace, that the word analysis, is never restricted to any one, or two, or three of the elements of a substance containing a dozen or more, all of which may, (with these exceptions) be classified together and weighed as one in a special analysis. If Dr. Gross had read the first three lines preceding the analysis, he would have seen these words:—"I take my pen to state the reason for recommending the Biphosphate of Lime."

Facts, Messrs. Editors, are as stubborn as a certain class of animals—and the fact is, that the Biphosphate was used in this case with the most remarkable results—results, which could not have occurred according to Dr. Gros's calculations, from the effect of means so minute in comparison with the weight of the land.

A full report of a qualitative and quantitative analysis would occupy the whole of one number of the *American Farmer*, and would be of no value to any one.—It would be like the experiment made by the earl of Zeeland at Aske Hill, in which he proved that salt would, on his land, produce twice as much as any other means that are much more valuable to others, without giving us the proportion of salt, in his land, or any other fact of general interest.

But half a dozen experiments with Biphosphate of Lime, on farms where its presence cannot be detected, would aid the cause of scientific agriculture more than all the isolated facts above referred to.

It is well ascertained that all of that immense amount of material that is insoluble in *Muriatic Acid* may, for all practical purposes, be safely classified with sand as far as agriculturists are concerned.—But, as I have not the vanity to suppose that my opinion is to govern the world in viewing an analysis or any thing else, I will beg of you to copy the words of Dr. Daubenay, in the *Bakerian Lecture* for 1845*—Dr. Daubenay says:—

"I insist upon the distinction between what may be termed the dormant and the active ingredients of a soil with reference to the plants that grow in it.

When we consider the nature of a soil in an agricultural point of view, in reference to its suitability for the growth of various kinds of vegetables, two questions naturally come before us, namely:—what amount of ingredients capable of being assimilated in the course of time by the crops, does it contain, and secondly, what is the amount of those which are present in a condition to be actually available for their purposes, at the precise moment when the examination is undertaken.

Both the above points are obviously quite distinct from that relating to the whole amount of ingredients which exist in it, and hence some might be disposed to add to the labor of the two preceding investigations, that of ascertaining the whole of its constituents, whether in a state to be affected by the ordinary agents of decomposition, or not.

The latter question, however, seems to me to possess, with reference to the agriculturist, only a speculative interest, and when introduced into a report intended for his use, may be more liable to mislead than to instruct, unless due caution be taken to point out to him, how much of each ingredient is to be regarded as inert, and how much of it is as applicable to the future or present uses of the plant.

Let us find the case of a natural soil, composed of several kinds of disintegrated lava, or even of granite, in which it is evident, that an actual analysis, conducted by means of fusion with barytes, or lead, or by any of those other processes which chemists employ for decomposing compounds of a refractory nature, would detect the presence of a large percentage of alkali, not improbably, of a certain amount of phosphate of lime, and in short all those ingredients which plants require for their support, in sufficient abundance. Nevertheless, land of this description, in consequence of the union of the elementary matters of which it consists, and the compactness of its mechanical texture, might be as barren, and as incapable of imparting food to plants, as an artificial soil composed of powdered glass is known to be, notwithstanding the large proportion of alkali contained in it.

Thus, "I" have myself observed, that the soil

* Philosophical Transactions, part ii.—1845; or Jour. Royal Agr. Soc., part i.—1846—p. 237.

which covers the serpentine rock of Cornwall, although the latter is principally made up of mineral, consisting of—

Silica	43.07
Magnesia	40.37
Alumina	0.25
Lime	0.50
Oxide of Iron	1.17

Water 12.45—*Hisinger.*

Contains, nevertheless, so minute a proportion of Magnesia, that in an analysis of a small sample, its presence had been altogether overlooked by me, in so great a degree may the mechanical condition of the components and the state of combination subsisting between them, preserve a rock from the decomposing action of the elements which tend to set loose its treasures.

Now it seems obvious, that whatever cannot be extracted from a soil by digestion in Muratic Acid during four or five successive hours, must be in such a state of combination as will render it wholly incapable of imparting any thing to a plant for such a period of time at least as can enter into the calculations of the agriculturist."

Were it of any value to the public, I could give the Chlorine, Sulphuric Acid, &c. in the soil referred to, from my note book, and also one or two analyses of the adjoining farm, but as far as the public are interested in the result, it would have been sufficient for me to state (to those who have known my application to chemistry for the past twenty years) that *I could not detect Phosphoric Acid in this soil, and therefore recommended Phosphates for its improvement, and that the result proved that I was right.*

The most elaborate calculations of the amount of caloric in any substance would not convince the merest tyro in chemistry that the thermometer was defective and worthless because it does not indicate the total amount of heat, but merely the free caloric. The thermometer is accurate within its sphere, and the reagents which we employ are the more valuable because they do not notice those elements of the soil which are not available to the husbandman, while they will detect with accuracy the 1-10th of a grain of available material in a square foot of soil.

I am very respectfully,
Your obt. Serv't.

DAVID STEWART, Md.

No. 77 Eutaw Street, Balt. May 22, 1851.

AN AGRICULTURAL CONGRESS.

AGRICULTURAL DEPARTMENT, }
U. S. Patent Office, July 12, 1851. }

To the Editor of the American Farmer—

Sir:—The members of several State Societies for the promotion of agriculture, propose to unite all existing associations, so far as they shall be willing to form a confederacy, under a representative and national organization. As isolation is the source of agricultural weakness, and combination the parent of all its strength, I am in favor of this union among all good men and true, to improve the arts, cultivate the sciences, and elevate the literature of American Agriculture. Why should not all State and smaller societies cordially unite their respective forces, and thereby hasten the attainment of educational and material advantages, which so many thousands now seek in vain to realize as isolated farmers? What do the friends of moral im-

provement lack but a thorough organization, to accomplish all their reasonable purposes? If some good is now attained by means of farmers' clubs, county, district, and State associations, who does not see that vastly more benefits might be gained, if all these local societies were to unite their efforts and make them tell in a concentrated form in favor of agricultural improvement?

It would be an impeachment of the common sense of the owners and cultivators of the soil, to assume that they will never go beyond their present initiatory and defective organizations, to promote their common interests, which are so obviously the interests of the whole Union. They must retrograde or advance by an overruling necessity; and if they are destined to confederate for mutual instruction and improvement, how many years longer should they wait before they attempt to realize the advantages of a National Board of Agriculture, as contemplated and recommended by the illustrious farmer of Mount Vernon? The patient friends of improvement have already waited more than fifty years for some patriotic Congress to act in this matter, and the question now is, whether we ought to delay action another half century to suit the convenience of a Congress of politicians. Cannot a Congress of Agriculturists, composed of delegates from State and county societies, establish a National Board or Bureau of Agriculture, in a week after they had come together and compared opinions? If my limited experience and observation are worth referring to, they lead to the conclusion that government machinery and political congresses are poorly adapted to work out the great results which the friends of agricultural progress so much desire. Congress may very properly furnish pecuniary aid to a wise and economical Board of Agriculture; but delegates appointed by State societies would be likely to create a better board than any congress of politicians; and the money expended under the direction of such a bureau, would do far more good to the country than if the government had the care of its disbursement. There are some 300 organized agricultural associations in the United States, without including small clubs, and their affairs are generally well managed, for they are conducted by men of prudence, intelligence, and integrity. These are the kind of men to form a national society, which, as it must be a representative body, might very properly be denominated "The U. S. Congress of Agriculture." It would be infinitely better to unite all existing associations under a common head, than simply to establish one new society, independent of all others, although it might be national in its character. Let us consolidate the strength which we already possess, and we shall gain more with astonishing rapidity.

Mr. Webster stated in his oration at the laying of the foundation for an extension of the Capitol, that there are ten thousand school libraries in the United States. Had the eloquent Secretary labored as earnestly to give to a single State (New York) her ten thousand school libraries, containing over thirteen hundred thousand volumes, as some we could name, he would have avoided so great an error, and one that does injustice to his own New England. The excellent common school libraries of New York, which are nearly equal to those of all the other States put together, are the legitimate fruit of associated effort; and I will not conceal the fact, that one object I have in view in uniting all local societies for the promotion of agriculture, is to lay

a foundation broad as the republic, for ten thousand agricultural libraries, in order to place our noble profession on its proper basis. Had we been easily disheartened in New York, we should not now have so many free schools, free libraries, county agricultural and horticultural societies, in active operation, and the certainty of getting an agricultural college at no distant day. Friends of agricultural knowledge, you have only to act in concert to build up ten thousand library associations in five years, and make rural literature the literature of a nation of farmers; and ultimately, by reflection, the literature of the world! The forest is felled, the glebe broken, the good seed sown, and the crop even now mature, ready for you to reap a glorious harvest. Come, then, up to the work like men, and remember that "to whom much is given, from them much is also required."

Through the agency of a national head at Washington, a large number of rare and valuable books from abroad, and numerous journals of foreign agricultural societies may be obtained by a system of exchanges, which the representatives of European courts near the seat of Federal power, are willing and often anxious to adopt. At present, we do not keep pace with the progress of agricultural science in Europe, where they have hundreds of experimental farms, schools, and colleges, with their museums and laboratories, for the increase of knowledge in every department of rural affairs. All this professional knowledge should be brought to us regularly by every mail steamer, sifted and winnowed, separating the chaff from the wheat, and giving the latter at the smallest possible expense, to the three millions of farmers in the United States. An easy combination of efforts will achieve this result, with the additional distribution of all useful and improved seeds, fruits and plants. The very little which has been done through the Patent Office indicates the practicability of doing fifty times more, and fifty times better than is now done, under more favorable auspices. I shall ask no patent right for the invention of a machine for collecting and diffusing agricultural knowledge, worth fifty times more than the one now in use by government. Important information received at the Agricultural Desk in May, 1850, will not go to the public before some time during the next session of Congress, in 1852. The old, lumbering, six horse wagons moved slow, but their speed was that of a locomotive compared with the progress of the agricultural statistics of Congress. No body of men but an American Congress would think of making annually a large number of almanacs, keeping them till one or two years after date, and then claiming great liberality for giving them away. Rest assured, no Congress of farmers will be guilty of such folly; and yet I see no reason to believe that any thing short of an Agricultural Congress can correct the evil of which so many complain.

Very respectfully, DANIEL LEE.

The wool crop of Michigan is estimated at not less than \$700,000.

In Ohio, the trade in wool is stated to be brisk, at an advance of some five cents a pound over last year's prices.

The Valley Agricultural Society purposes holding an agricultural exhibition and cattle show in the Fall.

FARMING IN ROCKBRIDGE, VIRGINIA.

HOME, ROCKBRIDGE, VA., June 10, 1851.

To the Editor of the American Farmer—

Permit me, while renewing my subscription to your invaluable paper, to send you specimens of my wheat, and to give you a short account of my little farming operations.

No. 1 is a smooth white wheat, called here the purple straw or rainbow, from its color when approaching maturity. The growth of straw is most luxuriant, easily sustaining my old straw hat when I throw it on the surface of the spike-like ears, and measuring an average height of five feet nine inches. My other wheat measures about five feet. The heads I send, are a fair specimen of a lot of eight acres, which is pronounced, by some of the farmers of my neighborhood, one of the finest pieces of wheat they ever saw. Some of them do not hesitate to assert that it is the very best wheat they ever saw grow out of the earth. The product is variously estimated at from thirty to forty bushels to the acre. My neighbor, Mr. Peter A. Salling, who, some years ago, made, by actual measurement, one hundred and seventy odd bushels of wheat on four acres of tobacco land, remarked that, he thought it fully equal to that lot; and Col. Jacob Ruff, of Lexington, was of opinion that it was quite as good as any he had ever observed at his father's (John Ruff, Esq., one of the best practical farmers in the county) who had made thirty odd bushels to the acre.

No. 2 is a white-bearded wheat, called the Harper, which I procured in Augusta last fall. The growth of straw is quite rank. The heads, you will observe, are remarkably long, measuring seven inches and a half.

No. 3 is the Mediterranean, which, though sowed very late (in November) on corn land, promises a yield of at least twenty bushels to the acre. In point of maturity, it has the decided advantage of the other varieties, as it will be ready for the cradle at least ten days earlier.

No. 4 is the common white-bearded. I have cultivated it with success for several years. My crop last year, unfavorable as it was for wheat, averaged seventeen bushels to the acre, and two years before, the average was about twenty.

The bearded wheats are best adapted to our bottoms, being, as all the world knows, less liable to rust than the smooth heads.

My entire crop of twenty acres of wheat is variously estimated by my neighbors at from four to five hundred bushels—supposing, of course, that the season should be favorable to its maturity.—The weather is now as fine as could be desired—cool and dry.

No manure of any kind has been applied to my wheat. The crop is the natural product of the system of improvement I have been prosecuting for several years. More than half of it was sown on a clover fallow, broken up in July and seeded the last of August and the first of September, with the new wheats I have described, at the rate of about one bushel to the acre, which, if sown early, equally distributed over the ground, and well put in, I have found by repeated experiments to be an ample allowance for my land. The seed was soaked in brine, rolled in lime, and first ploughed and then harrowed in.

I attach great importance to cultivating the new varieties, which generally succeed well for a few years, until they become acclimated and subject to

all the prevailing diseases of degenerated grain. I have never failed in a wheat crop, and I attribute my uniform success to the fact that I have always raised the *new* varieties. I change my seed of all kinds every three or four years. "Variety" is the spice of farming as well as of life. Nature delights in change.

My little farm, (about ten times as large as that of Cincinnatus) when I got possession of it, a few years ago, had been so reduced by improvident cultivation, that its average product did not exceed five bushels of wheat, fifteen of oats and twenty of corn to the acre. My crops for the present year, with ordinary luck, are estimated by good judges at twenty-five bushels of wheat, fifty of oats, from forty to fifty of corn, and two tons of hay, to the acre.

Had every farmer in the county of Rockbridge, and in this glorious old Commonwealth of Virginia, and in these United States (God grant that they may long be united!) effected an equal improvement in that portion of the earth which Providence has committed to his care to fertilize and beautify, not to impoverish and deform, what an immense addition would have been made to individual comfort and to national wealth!

How has this striking improvement been effected? Not by the lavish expenditure of money for guano and other fertilizers, for my entire experiments in that way (last year and the present) have not cost me ten dollars—I stick to the old ways until I have found out better—but by the liberal use of clover seed and plaster, taking care not to plough my land when it was wet, to break it as deep as possible (I have sub-soiled this year more than half of my twenty acres of corn land) and to keep my grass lots well covered with grass. The rotation I prefer, for crops and improvement, is a five shift, consisting of

1st. Grass, an equal mixture of clover and timothy, dressed early in March with equal quantities of plaster, ashes and slaked lime, at the rate of 3 bushels to the acre. The first crop to be mown, and the field lightly pastured in the fall.

2d. The same, pastured, but never grazed close. I am more than half a convert to my uncle Bob Baldwin's shade theory, which is confirmed by many facts under my own observation.

3d. Wheat—the volunteer clover plastered immediately after harvest, at the rate of half a bushel to the acre.

4th. Corn.

5th. Oats, with clover and timothy seed, plastered at the time of sowing at the rate of a bushel to the acre.

My experience is, that wheat on a clover fallow, on an average of years, is worth five dollars an acre more than wheat after corn, and that corn after wheat is equally superior to corn on a clover sod—making a difference of ten dollars an acre in favor of this rotation in preference to the customary one of corn on a clover-lea, followed by wheat. I object to the crop of oats, not because I concur in the prevailing opinion that it is more exhausting than wheat, but because it don't pay. At a maximum crop of forty bushels to the acre, and at the average price of twenty cents a bushel, you make only ten dollars an acre, whereas twenty-five bushels of wheat, fifty of corn, and two tons of hay, will bring double that sum. I intend to try some experiments to ascertain whether my land, in its improved condition, will not produce a crop of 20

bushels of wheat to the acre, after the corn, particularly if aided by a slight application of bone-dust, Chappell's Salts, guano, or some other fertilizer. If by expending five dollars to the acre, I can add five bushels of wheat per acre to my crop, and improve the land, I will be abundantly compensated. Query—Would it be best to apply the manure to the crop of corn?

But I did not sit down to write an essay on farming. At a more convenient season I will give you a full account of my little farming operations, in all their minute details.

My farm, I am painfully aware, is far, very far from perfection. In truth, I have hardly laid the ground-work for a series of improvements which I expect to carry forward little by little as long as I live. I hope in a few years nearly to double my present products, and to create a farm which will be worth looking at, as well for substantial improvements as for its appropriate and tasteful embellishments.

Most respectfully,

C. C. BALDWIN.

GUANO—PLASTER—GREAT PROFITS.

To the Editor of the American Farmer—

In using Guano, I have always mixed Plaster, and think it has proved highly beneficial. Some of my neighbors have omitted the mixture of plaster, and they inform me that good results have followed. I do not think that in the controversy between yourself and T. S. P. the facts and arguments adduced, have settled the question to my satisfaction. I shall, this fall, sow four acres of poor land in wheat, putting guano and plaster on two, and guano alone on the other two. I shall see if there is any difference in the crop, and also in the general improvement of the land. Should any perceptible difference present itself, it shall be communicated to you. Fall before last, I applied a ton and a half of Peruvian guano to ten acres of my poor land, mixing one-fourth plaster, by measure, with it.—The result was 199 bushels of wheat. Without the guano and plaster, I am certain there would not have been ten bushels made on the same lot of land. The wheat was sold at the barn door, for seed, for \$1.17, making a clear profit on the investment of over two hundred per cent.

Yours truly,

R. H. NELSON.

To the Editor of the American Farmer.

I do not suppose that any thing from me in commendation of the "Farmer," could add to its importance; but I assure you I would freely pay the amount for one of several Nos. which I have, more especially as it has something occasionally from neighbor Ruffin. In your last No. you have the plan of a *marl raiser*, from "Magnolia." I may be mistaken, but I think we are using one very superior to it. My object is not to bring my name in competition with "Magnolia," nor appear as the originator, but for the public good. I refer you to the Farmers' Register for the plan; I adopted it with the advice of Gen. Corbin Braxton, who has since adopted the same plan; we have been working it about two years, and find it every thing we could wish. It is quite a job to get the timbers, from their length and size, but it is certainly a powerful machine; we can raise the marl as fast as seven or eight carts can move it. By the way, Mr. Editor, this region is not behind any part of Virginia in improvements; it would do you good to see our deposits of *green sand marl*. With my best wishes for the success of the Farmer,

I am yrs. respectfully, ROBT. A. MUNDAY.

King Wm. Co., Va., June 2, 1851.

CULTURE OF THE STRAWBERRY.

By the Editor of the American Farmer.

As no garden is complete in its appointments, without it has in it a bed or two of this delicious fruit—this luxurious and healthful source of enjoyment—we shall again lay down a plan of culture, in the hope that it may call the attention of such gentlemen, whose gardens are without them, to a sense of the necessity of planting one or more beds. A bed 30 feet square, would yield an ample supply for a family, both to be eaten with sugar and cream, and for preserves. Where the supply is desired to be *prolonged*, one bed should be selected with a southern exposure, the other with a northern one—these differences in exposure, will operate to *continue the supply fully two weeks longer*, a matter of great importance with a fruit at once so grateful to the palate, and so health-giving to the system, in its indulgence.

Selection of bed. For an early supply, select a bed with a southern exposure;—for a late supply, select a northern exposure.

Soil. The Strawberry delights most in a moist soil,—it is not material whether it be a deep sandy-loam, or a deep clay-loam, so that it be moderately moist, but *not wet*. A clay-loam, of proper texture, would probably produce most fruit; but not so early as a sandy loam. What we mean by *proper texture* of a clay loam, is one that is not very tenacious, but is friable, easily worked, and susceptible of being put in first rate order.

Preparation of the bed. Let the bed be trenched to the depth of 12 inches at least. When thus dug, a dressing of compost manure must be spaded in. As the spading progresses, let the soil be thoroughly pulverized by the rake. This done, put on a full dressing of a compost formed of 4 parts well rotted dung, 3 parts wood's-mould, or other rich mould, and 1 part slaked ashes; spade this in half spade deep, taking care to rake as the spading progresses, so as to bring the soil into fine tilth; and complete the work by passing the garden roller over the bed.

Laying off the bed. Your bed having been prepared as before directed, divide it into compartments or beds, 4 feet wide, with alleys 2 feet wide between each, for the convenience of working, weeding, and gathering the fruit.

Distance of planting the vines. Make 3 rows of strawberries in each bed, and place the vines 12 or 18 inches apart in the rows, according to the size of the variety.

Time of setting out the plants or vines. In spring, this can be done in *March*, in the southern States, in April and May in the middle states, and in May in the north and east: in *Summer*, any time after the middle of *August*: in *Autumn*, during all *September*, and *October*: if the fall be a very mild one, the planting may be continued till the middle of *November*. Beds set out in the fall, or early in the spring, will bear fair crops the first year—those set out later, will bear the succeeding year.

Management of newly planted beds. After your vines are set out, place long straw, or tanner's bark, between the rows, to preserve moisture, and be careful to give the plants waterings every few days until they take root, or a rain occurs. Beds planted out in spring, must be watered, in times of drought, throughout the season, as the vines require moisture, and are injuriously affected by long continued dry weather, unless thus assisted.

After Culture. During the first two seasons, cut off the runners before they have a chance of taking root. Early in each spring, remove the straw, or tanner's bark from between the rows, work the ground between the vines with a small hoe, and draw a little earth around them; then spread fresh straw, or tanner's bark, or, indeed, both, between the rows, to preserve moisture in the earth, and protect the fruit, when formed, from grit and sand. This done, (before your vines get into bloom) give them a thorough watering with a solution of soot, made in the proportion of 6 or 8 quarts of soot to a hogshead of water. This is the very best manuring you can give them, as the soot contains all the substances they need to aid them in the formation of their fruit; and when thus applied, they are in the best possible condition to be taken up by the plants, through their feeders or spongioses.

While the fruit is being formed, the vines, in dry weather, must be repeatedly watered; but, after they are in bloom, the utmost care must be observed, not to wash off the farina of the flowers, as, should you do so, you will inevitably prevent the formation of fruit. To avoid this, the rose or nozzle of the watering pot must be held well down to the ground, and the water suffered to escape moderately therefrom, so as not to splash on the flowers. Early, each spring, strew a mixture of equal parts of plaster and salt over the bed, so as to whiten the soil.

After the vines have borne fruit the first year, say, in the month of July, remove the straw, and weed the plants, remove all dead leaves, and give the vines a working with the hoe. This done, dig in with a fork, a slight dressing of well rotted manure, or compost, a few inches in depth, say about 4; rake the ground, and leave it thus till fall, when long straw or tanner's bark, or both, must be replaced between the rows. The treatment, each succeeding year, must be as before advised, with the exception, that the runners must be permitted to grow the fourth year, to supply the plants for setting out a new bed, as the power of yielding fruit, *abundantly*, only lasts four years. Indeed, they begin to decrease after the second year. Some permit the runners to root the third year, and in the fall of that year, place manure on the old vines, dig them in, and rake, leaving the rooted runners to form the bed of strawberries the ensuing three years. If pains be taken to give proper direction to the runners, in rooting, this plan saves the labor of transplantation, and answers very well during one course. In manuring, ashes must not be forgotten in the compost, as the inorganic, as well as the organic matters carried off by the crops of fruit, must be restored to the soil.

It would be best, however, to form new strawberry beds every fourth year.

Choice of Varieties. Where there are so many varieties of the same fruit, it is a difficult matter to make such a selection as will please all. Those which are grown in this market, mainly, for sale, are the *Large Early Scarlet*, and the *Large Pine Apple*, both are finely flavored, of large size, and productive; but we doubt much, if there be in the whole catalogue of this fruit, one variety of such exquisite, luscious, flavor, as the *Early Virginia Scarlet*, or one which, with cream and loaf sugar, as accompaniments, has half as many admirers; it is hardy, fruitful, and none the worse for being an old and well established variety, and for having been improved by reclamation and culture. Ho-

vey's Seedling, from its immense size, has great popularity, bears well when grown in the vicinity of a male variety. If this variety be cultivated, about every fourth or fifth row of plants should be of some staminate sort, to carry on the necessary work of fecundation. *Keen's Seedling*, another large variety, has many advocates; so has a new variety, originated by Mr. Burr, of Ohio, called *Burr's New Pine—a Seedling*. This is a pistillate variety, and must be assisted by a staminate sort. The *Royal Scarlet*, is held in high estimation, *Prince's New Pine*, ranks well; so do the *Boston Pine*, *Methven Castle*, and *Jenny's Seedling*. Buist's selection consists of *Early May*, *Hovey's Seedling*, *Prize Seedling*, *Ross' Phenix*, and *Monthly Copii*.

With the above varieties before him, no farmer need hesitate, if his garden is not already provided, to select and set out a bed; but as the garden is rightfully the domain of his lady, we may be permitted to request of her,—that, if there be no strawberries in her garden, to see that so radical an omission in its appointments, be at once filled up.

With respect to the spring treatment of strawberry beds, we will state what we consider a good practice. In the early part of March, if the weather be dry, select a day with a moderate breeze; fork up the old straw to be dried by the sun and air, spread it regularly over the bed; if the quantity is not sufficient to cover it, add more straw, set fire to it. Thus you will get rid of dead leaves, dead weeds and their seeds, in a few minutes. When the strawberry plants spring up, hoe and dress them with a compost, strew a mixture of ashes, salt and plaster over them, cover the intervals between the vines with straw, and cultivate as we have before laid down.

✍ In the management of your Strawberry beds recollect this truth—Weeds and grass should never be permitted to grow in them.

Mr. Davis, of Mobile, Ala. has promised us some of the plants of the variety raised by him, noticed in our last.

FRUITS—DISEASES AND INSECTS.

The Fire Blight in the Pear, Apple, and Quince.

This is one of the most formidable diseases to which the fruit trees are liable. Whether it is caused by the sun, the atmosphere, or an insect, remains in doubt, some cases favoring one opinion, some another. It attacks the trees at different periods of the growing season from June to September, and generally in the young parts first; the leaves flag, the sap becomes thick and brown, oozing out in globules through the bark, and emitting a very disagreeable odor, and the diseased branch or part turns thick as if it were burned by fire. When the *pear tree* is attacked it is difficult to save it, the disease spreads so rapidly. In the *apple* and *quince* it is less fatal, rarely killing more than a portion of the tree even if left to its own course. The only remedy is, to cut away instantly the blighted parts, into the sound wood, where there is not the slightest trace of the disease, and burn them up immediately.

It is thought by some that young trees growing very rapidly are more subject to it than older trees growing slowly; and that warm sunshine, with a sultry atmosphere after rain, is apt to be followed by much blight. We have always regarded the cases favoring such an opinion as accidental.

✍ *Pear leaf Blight.*—This disease is a sort of rust

that appears on the leaves in July or August, first as small brown spots; these spread rapidly over the leaves until they are completely dried up and growth stopped. It appears in a certain spot as a centre, from which it spreads. Whether it be an insect, a fungus, or some atmospheric cause which produces this blight, is unknown. More minute investigations are wanted on the subject."

"To avoid its evil effects as far as possible, the great point is, a rapid, vigorous growth, before mid-summer, when it usually appears. Seedlings grown in new soils do not appear to be so much affected as in old. Where stocks are affected very early in the season, they become almost worthless, on account of the feebleness produced in both stem and roots by such an untimely and unnatural check. Some special applications, such as coal cinders, iron filings, copperas, &c, have been suggested, but no evidence has yet been produced of their efficacy." *Barry's Fruit Garden.*

(To be Continued.)

MOLES.—It is questionable whether moles do not do more good than harm. They feed upon slugs, worms, snails, and insects, and consequently do much good in this way.

They are caught and destroyed in various ways. Sometimes they are hunted by *terriers*, who, after a little training, will hunt and kill them of their own accord.

They are sometimes caught in traps. At others they are suffocated in this way,—a hole is made in one end of their tracks, into that tow or cotton saturated with a mixture of rosin and sulphur, is placed, and set fire to. Again,—wheat flour is sprinkled over with arsenic, made into dough, divided into pellets, and placed in their holes—They eat the dough and are poisoned.

Ten or a dozen plants of the *Palma christi* or *Castor oil bean*, distributed over an acre, will, it is said, banish them from the ground. *Alder*, it is said is offensive to them and will drive them off.

Collect earth worms, kill them, mix them up with *nux vomica*, or any other poison, place one or two worms in the holes or tracks of the moles; the moles eat them, and as a consequence are killed.

Place the broad end or neck of a quart bottle at the mouth of their track, they will enter but cannot get through the small end, as, for want of a foot hold, they cannot push their way through the mouth end of the bottle, and as they cannot turn round, they are trapped.

EXPERIMENTS IN GROWING OATS.—Mr. Charles Gardner, of Monkshill, in Aberdeenshire, Scotland, manured an acre of land in oats with 2 cwt. of sulphate of ammonia.

Produce 81½ bushels of oats weighing 41½ lbs. to the bushel, 473 stones of straw. An acre of the same land, undressed, yielded 53 3-4 bushels of oats, weighing 43 lbs. to the bushel, and 321 stones of straw. Increase in favor of the acre manured with sulphate of ammonia, 27¾ bushels of oats and 150 stones of straw. "Stephens' "Farmer's Guide."

The above experiment tells well in favor of the efficacy of sulphate of ammonia, and proves how judicious is the practice, of using plaster in combination with all animal manures.—*Ed. Am. Farmer.*

✍ Prepare for the Grand Fall Exhibition of the Maryland State Agricultural Society.

FLORAL DEPARTMENT.

Prepared by John Feast, Florist, 279 Lexington st. for the American Farmer.

As the season advances, things will be in a more flourishing condition in the open ground; and being established, will now make a fine display of flowers: as Verbenas, Petunias, Portulaccas, Echal-tias, &c.

Dahlias should be carefully tied up as they advance in growth; prune off all superfluous shoots, and pick off such foliage as is attacked with the red spider; syringe them frequently, and give plenty of water, to ensure a full bloom.

Roses may be increased by layering, budding or cuttings, and plants wanted for flowering early, should be repotted this month, to have them well established.

Schizanthus, *Nemophyllas*, *Mignonette*, *Sweet Allysium*, *Pansies*, &c. may be sown for winter blooming; also the different stock Gillyflowers.

Chinese Primroses—Shift now into pots for flowering, and sow seed for a fresh stock.

Pelargoniums may be headed down to within two or three eyes of the old wood. Do not give too much water till they begin to grow again, or they are apt to rot off. Seed may be sown in pots or boxes in suitable soil.

Lemons and *Oranges* may be budded this month. *Gloxinias*, *Achemenes*, and such like, keep in a shady place, and repot in suitable sized pots for blooming, those that are likely to bloom this season.

All greenhouse plants will require repotting, and such as require it, should be headed down, to give them a proper shape. Give them plenty of room, and occasionally water with liquid manure—this will be a great benefit to their growth, and also add much to the appearance of the foliage.

As planting is all done out of doors, it is only requisite to keep the borders in good order.

Sow the seeds of herbaceous, perennial and biennial plants for flowering next year in the open ground, as *Lychnis*, *Dracocephalum*, *Double Wall-flowers*, *Carnations*, *Pentstemons*, *Statice*, *Phloxes*, &c. They make strong plants by the fall, and will be able to stand the winter. In the spring they can be transplanted without the least difficulty.

GUANO IN ENGLAND—STRIKING FACTS.

We find in the "*Massachusetts Ploughman*" of the 12th July, an extract taken from a foreign paper, of a debate in the British House of Lords, in which the *Duke of Richmond* called the attention of the Secretary of the colonies thus to the following facts:

"The noble Duke said, that as his noble friend the Secretary for the colonies was then in his place, he would put a question to him which would not occupy much of the time of their lordships. Their lordships must be aware that at the present moment there was a great increase in the demand for Guano, and that the Peruvian government had almost a monopoly of it. That government sold it in the port of London at £5.10s. per ton; but the parties who hold it would not part with it to the agriculturists of this country at less than £10 a ton. The agricultural interests had, therefore, learned with great satisfaction that a discovery of a large store of guano had lately been made in Western Australia; but it had learnt at the same time with much regret, that the government of that colony had placed a duty of £2.10s. a ton on its export from that colony. Now

as this country was receiving the corn of Western Australia without duty, it was hard upon the farmers of England to find the government of that colony placing on such a commodity so heavy a duty as £2.10s. per ton. Now he asked his noble friend, whether he knew that the governor of Western Australia had imposed such a tax on guano, and whether if he did know it, he approved of his proceedings."

Earl Gray, the Secretary of the colonies, admitted that he was aware of the imposition of the duty, and said that he "had directed a despatch to be sent to the Governor of Australia, desiring him to reduce the duty in that colony to £1., and to afford every facility for the exportation of guano."

Now the facts which we desire to call the attention of our agricultural friends to, are those stated by the Duke of Richmond; viz: that the Peruvian government placed the guano in England at £5 10s. per ton, which, at \$4.44 cents to the pound, is \$24.42 cents, and that the agents there, extorted from the agricultural consumers, £10, which is \$44.44 cents per ton being an advance per ton, upon the price it was delivered to them by the Peruvian government, of \$19 98—an advance, which in our opinion, is an outrage, being a profit of very near 82 per cent.

As we derive our guano from the same sources, and as it is doubtless placed here at the same cost to the British agents, to wit, at \$24.42 cents per long ton, it is well to let our agricultural friends know, how exorbitantly—how shamefully, they are *fleece*d, to gratify the cupidity of those English Agents, into whose hands the Peruvian government, have placed this odious monopoly. Our motto is—"live and let live"—but we protest against this system of robbing the many for the benefit of an extortionate few.

THE WHEAT IN JEFFERSON, VA.—Hussey's Reaper.

Mr. Editor:—It has been from no intentional neglect, nor from any want of due appreciation of your interesting journal, that I have so long omitted to send you the amount of my subscription to the "*American Farmer*." The delay has proceeded rather from a forgetfulness and procrastination, for which I blame myself a great deal more than you could.

The farmers in this neighborhood have generally finished their harvests. I have been a resident of this county for twelve years, and have not before, I think, seen so abundant a crop. The wheat is of fine quality and promises to yield well. Of the different varieties of wheat, preference is to be given, in my opinion, to the Zimmerman and Mediterranean: the former doing best upon land of good quality, well prepared; the latter, upon corn land, or thinner soil. The white wheats are not held in much esteem.

I have now for two years used one of Hussey's Reapers. The machine has performed to my admiration, and I give most willing testimony in its favor.

I have said much more than was necessary in a communication intended only to cover my subscription; but it seemed to me that it might be agreeable to you to be informed of the progress made in our harvest, and of the prospects of the farmer.

I hope you will continue to send me the "*American Farmer*," as the enclosed balances my subscription to 1852.

Charleston, Jefferson Co. Va., June, 1851.

HIGHLY IMPROVED ESTATES AND VALUABLE TIMBER LAND, On Lower Jamer River, For Sale.

The undersigned, prevented by engagements requiring his undivided attention elsewhere, from residing on his estate, will sell, on the premises, publicly, at 11 o'clock, A. M., on Tuesday, the 23d day of September next, without regard to weather, that large and valuable body of highly improved arable and heavily timbered LAND, extending up the north side of James River, from the Chickahominy, a distance of more than 5 miles, in the County of Charles City, Virginia, well known under the general designation of

"SANDY POINT."

This estate lies 33 miles below Petersburg, 45 miles below Richmond, and about 65 miles above Norfolk, in what is justly considered the finest and most extensive grain growing region of Virginia, and as healthy as any on our rivers. Spring and well water abundant and excellent. The number of acres is upwards of

FOUR THOUSAND,

Of unsurpassed natural quality, of which more than 2000 acres have been thrice limed, and are now in a high and successful state of cultivation, upon the five field rotation; and more than 1000 acres well set in clover. The balance, chiefly in wood and timber, embracing some of the best timbered land in Eastern Virginia, convenient to good navigation. Marl abounds in the river, and stone lime is supplied at 6 cents per bushel.

The subdivisions will be nearly as follows, of which surveys and maps will be exhibited:

[No. 1.]

"UPPER QUARTER,"

841 ACRES,

560 improved, 281 principally in wood and timber. Buildings—a small frame-dwelling, kitchen and laundry, smoke-house, negro houses, &c. Barn with sheds and stationary horse power and shelters.

[No. 2.]

"UPPER TEDDINGTON,"

THE FAMILY RESIDENCE,

797 ACRES,

540 improved, 257 principally in wood and timber. Buildings—a commodious wooden dwelling, large two storied kitchen and laundry, ice-house, new and commodious stable and carriage house, store house, shops, servants' houses, and every other convenient outhouse usually on such farms. Also, a new barn, part wood and part brick, with four floors, 80 by 38, and a wing 30 by 50, for bone, plaster, saw and grist mill. In the barn are two new 36 inch drums, revolving rakes, fans, sieves, and every other appurtenance for threshing and winnowing wheat, shelling and fanning corn, grinding and sawing; all efficiently driven by a 16 horse-power stationary engine, in complete order and condition. The orchards are large and stocked with fruit of every variety, of the finest quality.

[No. 3.]

"LOWER TEDDINGTON,"

716 ACRES,

564 improved, 152 principally in wood and timber. Buildings—a new framed dwelling with 4 rooms and a passage, negro houses, a large and well arranged barn, with stationary horse-power and shelter, two large stables for horses and oxen, extensive hay house, and well constructed buildings for the protection of wagons, carts, implements, &c.

[No. 4.]

"NECK,"

707 ACRES,

537 improved, 171 principally in wood and timber, exclusive of more than 120 acres of meadow or marsh land, well located and reclaimable at small expense.

A valuable winter fishery belongs to this farm.—Buildings—a small new frame dwelling, smokehouse, negro houses, stable and large barn, with stationary horse power and shelter.

Each division has a good landing, at which wharves can be erected cheaply and conveniently. To "Upper Teddington," within 100 feet of the barn, belongs a new, commodious and substantial wharf, adapted to any sized vessel. Steamers pass twice a day, and sometimes oftener, from Richmond, Petersburg, Norfolk, Baltimore and Philadelphia.

[No. 5.]

1200 ACRES OF TIMBERED LAND,

considered the most valuable in this part of Virginia, lying on and near navigation, which will be divided in parcels of 100 acres or more.

Also, all my Stock of every description consisting of

164 HEAD OF SUPERIOR IMPROVED

CATTLE,

of the Devon, Durham and Ayrshire crosses. Among them one fine full-blooded, and one half-blood Ayrshire bull; 210 sheep of the stock of Mr. Reynolds, of Delaware; hogs; 39 mules and 3 horses—together with a large and valuable collection of implements of every variety, &c., &c.

Before the day of sale, more than 425 acres of the clover will be fallowed, and purchasers will have time and the privilege of extending the preparation for seeding to suit themselves.

Full possession of the Farms given on the 1st of January next; of the Timbered Lands immediately.

Mr. Nicol, residing at "Sandy Point," is prepared to show the property in my absence, and a particular examination is invited before the sale.

A portion of the SLAVES, in families only, will be sold to the purchasers of the farms, if desired.

TERMS—For the Farms, one fifth cash, the balance in 5 equal instalments, with interest payable annually upon all the instalments. For the Timber Land, one-fourth cash, the balance in three equal annual instalments, interest payable annually, as above. For the perishable property, a credit of 12 months upon all sums over \$100. Approved personal security upon all credit payments and deeds upon lands, additional.

Letters of inquiry, addressed to Petersburg, will be promptly answered.

ROBERT B. BOLLING.

Petersburg, July 8th, 1851.

Aug. 1-2t

CHICKERING'S PIANOS.

THE Subscriber is Sole Agent in Baltimore, for the sale of CHICKERING'S CELEBRATED IRON FRAMED GRAND AND SQUARE PIANO FORTES, and is constantly receiving supplies from the factory in Boston, which are sold at the same prices as charged by Mr. Chickering.

Chickering's Pianos are unquestionably the best instruments manufactured in the United States. In regard to superior quality of tone, touch, durability, and all the essential qualities of a Piano, they are admitted by the most eminent Pianists to be equal to Erard's, of Paris, or Broadwood's, of London.—Although there are several factories in Boston and New York of high reputation, Mr. Chickering undoubtedly stands at the head, possessing eminent talent, skill, unerring industry and experience of some 35 years as a manufacturer of pianos, with abundant means to enable him to carry out his plans in producing the very best instruments.

Orders from the country, untrusted to the subscriber, either for Pianos, Music, or any article in his line of business, will be faithfully executed.

Jan 1 8t.

F. D. BENTEN,
181 Baltimore street.

**JOHN ROWLETT,
PRODUCE AND GENERAL
COMMISSION MERCHANT,
City Wharf, Petersburg, Va.**

Farmers supplied with Peruvian Government GUANO, Thomaston Lime, Lubec Plaster, and Agricultural Implements of every kind, always at the lowest market prices. Consignments of Virginia and North Carolina Agricultural Products solicited. Commission on sales of Wheat one cent per bush. Mr. D. A. Weisiger or F. C. Steinback will always be found during my absence from my office on City Wharf, prepared to attend to business. Jy. 1

**A. LONGETT,
COMMISSION MERCHANT,
Office at the State Agricultural Warehouse,
25 CLIFF STREET,
NEW YORK.**

THE WORKING FARMER, a monthly publication, devoted to Agriculture, &c. &c.; edited by PROF. J. J. MAPES; published by A. LONGETT, 25 Cliff street. Jy. 1 St

GUANO--GUANO.

THE subscribers have now in store supplies of Peruvian and Patagonian GUANO, which they will sell in lots to suit at the very lowest market rates.

They are expecting further arrivals of Peruvian about 1st August, and also about 1st September, and are now prepared to contract with farmers for their fall supplies, deliverable from ship at those periods—thus saving the purchaser a heavy charge for transportation.

Ground Plaster in barrels.
GROUND BOVE, pure.
Clover and Timothy SEED.
KETTLEWELL'S RENOVATOR.
Reynolds' CORN SHELLERS.
FISH, BACON, TAR and SALT.

Jy. 1 W. WHITELOCK & CO. cor. Gay and High sts.

4000 TONS PERUVIAN GOVERNMENT GUANO on hand, and to arrive.—500 tons PATAGONIAN—for sale by **S. FENBY & BRO.** Corner of Gay and Pratt streets, Baltimore.

S. Fenby & Bro. are now prepared to make contracts for further delivery for Fall seeding, and having arranged for their supply of Guano arriving early in the season, purchasers can rely on not being disappointed. A large amount of Guano intended for the Fall crop will not arrive in the United States until late in the autumn. Jy. 1.

**Peruvian Government GUANO.
WHOLESALE & RETAIL.**

HAVING made arrangements with the Government Agent for a limited but certain supply of the best Peruvian Guano for Autumn sales, I am now prepared to receive orders from my friends for whatever quantity they may desire.

To avoid delay and disappointment, those who intend to use this invaluable fertilizing agent had best send in their orders at once.

The price can be fixed now or at the time of delivery, as may be preferred. **JOHN ROWLETT.** Petersburg, Va. June, 1, 1851. Jy. 1

GUANO--GUANO.

500 TONS PERUVIAN GUANO, direct importation, and warranted equal in quality to any in the market. The Guano is put up in good strong bags, and is in fine shipping order. For sale in lots to suit purchasers, at the lowest market rates, by

WM. ROBINSON, No. 4 Hollingsworth st. near Pratt st. wharf, Baltimore, Md.

Also, PATAGONIA GUANO, BONE DUST, Building and Agricultural LIME, for sale on the best terms. Jy. 1-tf

BONE-DUST AND POUDRETTE ESTABLISHMENT.
On Harris' Creek, at Canton, Baltimore.

THOMAS BAYNES, continues the manufacture of **POUDRETTE**, and is prepared to supply any orders for the same.—The article manufactured by him, will be found probably more valuable than any made in the Eastern cities. His **BONE-DUST** weighs from 55 to 60 lbs. to the bushel, and is as fine as any article sold in this market. Price of Bone Dust, 60 cents per bushel. Poudrette, \$1.12 per barrel. Persons sending their carts or wagons to the factory, can obtain the Poudrette at 20 cents per bushel.

Orders left with **S. SANNE**, at the office of the American Farmer, will be attended to.

Important to Farmers and Machine Makers.

THE subscriber respectfully informs the public that he has lately completed a **TRIPLE REACTING INTERNAL GEARED HORSE POWER** which outvalues any in use.—It is made entirely of iron, both Frame and Gearing. The Journals are made of Cast-Steel—its weight is 600 lbs. On trial it has proved itself capable of performing from 50 to 100 per cent. more work than other Powers with the same labor of the team. It is warranted to hold 8 horses.

I have also completed a combined **THRESHER AND CLEANER**, which is capable of Threshing and Cleaning from 300 to 500 bushels of wheat per day, with from 6 to 8 Horses and an equal number of hands.—4 horses can thresh with it from 100 to 200 bushels per day of wheat, and 400 to 500 of oats. It is very convenient for those who follow Threshing, and for two or more farmers to own in company, it is more convenient to move than any machine in use. The Machine stands on the wagon while threshing—the Power is loaded on the same wagon in moving—two horses are sufficient to move it; it will save enough labor in threshing 2000 bushels to pay its extra cost. It will thresh in a field or by a stack as conveniently as in a barn. The cylinder and concave can readily be adjusted so as to thresh with equal facility both tough and dry grain.—it is free from the complication and inability to get out of order of other machines of the kind, and of less cost.

Machine makers supplied on the most reasonable terms. Powers made by wholesale by **I. W. GRIFF, Lancaster, Pa.**—Threshers, Machines, &c. made and for sale by **Jeffrey Smalley, Columbin, Pa.**

All orders directed to the subscriber at Lancaster, Pa., will be promptly attended to.

SAMUEL FELTON, Jr.

Also for sale by **E. Whitman, Jr. & Co., Baltimore.** Jy. 1-y

**STATE AGRICULTURAL WAREHOUSE.
G. H. BARR,**

No. 25 Cliff street, New York.

HAS constantly on hand a large assortment of **AGRICULTURAL and HORTICULTURAL IMPLEMENTS, FIELD and GARDEN SEEDS**—Among which may be found:

Prouty & Mead's Premium Eagle Centre Draft **PLOWS**, which took the first premium at the last N. Y. State Fair—Emery & Co.'s Improved Edgewise Chain **HORSE POWER**, which took the first premium at the last State Fair, in competition with Allen's, Wheeler's, and others of note. Bogardus' Sweep Horse Powers, and others.

Hovey's Straw Cutter.—This cutter is considered superior to all other Cylindrical Cutters.

Corn and Cob Crushers—Beal's & Sinclair's Grain Mills, made of Burr Stone and Cast Iron—Water Rams—Chain Pumps—Wagons—Carts—Axles, Wheels, &c.

Winter Wheat—Mediterranean—Black Sea and White Flint Wheats.

Timothy Seed—Red Top—Kentucky Blue Grass—Rye Grass, Clover Seed, &c.

GUANO—Peruvian and Patagonian—Bone Dust—Plaster of Paris—Bone Black—Sugar House—Scum and Poudrette, and all other articles in the Agricultural line, which will be sold as low as can be purchased in any similar establishment in this country.

P. S. As this establishment employs no travelling Salesmen, planters and others may rely upon not having the charges of such an appendage to pay with their goods. G. H. B.

Jy. 1-St

650 Tons Genuine Peruvian Guano.

THE subscriber offers for sale six hundred and fifty tons No. 1 Peruvian GUANO, in first rate order, put up in heavy osanburg bags, and warranted equal to any in the United States.

Agricultural clubs and individual purchasers are assured that they can be supplied upon the most favorable terms, and are invited to call before making engagements elsewhere.

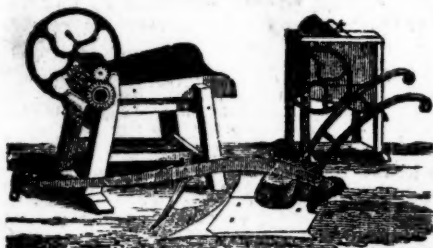
FITZLAUGH COYLE.

National Agricultural and Seed Warehouse,
7th street, Washington, D. C.

Jy. 1-2

A. E. WARNER, No. 10 N. Gay st.

MANUFACTURER OF SILVER WARE, FINE GOLD JEWELRY, and importer of **BEST SILVER WARE, FANCY ARTICLES**, &c. would respectfully invite the attention of those in want of any of the above articles, that he keeps always on hand, and makes to order, every variety of Silver Ware, fine Gold Jewelry, and best quality Silver Plated Ware, which he will sell on the most accommodating terms. Feb. 1-tf



SELLING OFF TO CLOSE!

A STOCK OF

AGRICULTURAL IMPLEMENTS

Amounting to \$10,000.

TO BE SOLD AT GREAT SACRIFICE.

THE undersigned having determined to change their entire business, would call the attention of Farmers, Gardeners and Dealers, to their extensive stock of Agricultural Implements, which they will dispose of on the most reasonable terms for cash, with a desire of a speedy close.

The Implements consist, in part, of Horse Powers and Thrashers; Wheat Fans, a superior article—took the First Premium at the late annual Fair; Straw Cutters, various kinds and sizes, consisting of Cylindrical Box, which is too well known for us to speak further—the Raw Hide Repeating, or the Boston Box, suitable for cutting straw or hay; Corn Shellers of all kinds; Ploughs of every kind, suited for the different varieties of soil. Our stock of the latter is very large, numbering upwards of 600, which we will close out at much reduced rates. Also, Churns of an endless variety, with Shovel Forks, Cradles, Briar Hooks, Apple Pears, Sausage Cutters and Fillets, together with a general assortment of articles suited for the farmer. Home Seeds from the Shakers' Gardens, N. York, celebrated for their freshness, &c.

We will also dispose of an elegant STEAM ENGINE, Turning Lathes, Circular Saws, Drilling Machines—together with an elegant Brick Shop, making everything complete for manufacturing purposes. The agricultural community will please give us a call before purchasing elsewhere.

No. 97 NORTH PACA ST., near Franklin.

For the accommodation of those having water communication with the city, we will have an office on BALDERSTON STREET, near Light, where we will be happy to receive all orders, and promise to give punctual attention.

mar 1

HAMBLETON & DIDIER.



J. T. WATKINS,

FEATHER BEDS,

CURL-HAIR MATTRESSES,

FURNITURE AND VARIETY STORE, &c.

No. 47 South street,

Between Lombard and Pratt street,

BALTIMORE.

Ap. 1-lyr



C. H. DRURY, Hollingsworth street corner of Pratt—Head of the Basin—having completed his establishment with Foundry connected, for the making of his own Castings, is prepared to furnish all varieties of AGRICULTURAL IMPLEMENTS and CASTINGS, made to pattern of the best material.

The following is a list of PLOWS kept constantly on hand: Davis, of the different numbers, for wrought and cast-steel; S. & M., Chenoweth, Wiley, 2 and 3 furrow, No. 6, Hill side, No. 1 and 3 Connecticut—Bench Improved or Posey Plow, with common Davis cast-shear—Self-sharpener or wrought shear—Corn Cultivators, plain and expanding—Tobacco do.—Wheat Fans—Corn shellers with double hopper—Old Vertical and Virginia sheller—Harrow—superior Pennsylvania made Grain Cradles—Revolving Horse Rakes—Cylindrical straw Cutter, &c. &c. Horse Power GRIST MILLS, a very useful and saving article, and coming into general use. HORSE POWER AND THRASHING MACHINES, of these I need not say any thing, as wherever they have been in use any time, they are preferred to all others.

C. H. D. will this year make a smaller size Power & Thrasher, (price of Power, \$100, Thrasher, \$50, Band, \$10, or when taken together, complete, \$150 cash.) Persons in want of Implements made of the best material, and put together in the strongest and best manner to answer the purpose for which they are intended, are invited to call on the subscriber. jel

AGRICULTURAL IMPLEMENT DEPOT

And Produce Store,

No. 95 LIGHT STREET WHARF,

And in front of the small wharf where the Hugh Jenkins, Cambridge and other steamboats start from daily.

TO facilitate and render this business more convenient for his customers and himself, the subscriber has taken a convenient and commodious Warehouse in Baltimore, as a depot and sale place for all the various Agricultural Implements manufactured at his shop in Carroll County; also, to sell the products of his Farms, Mill and Foundry.

The following articles of his own manufacture and produce, he will endeavor constantly to have there for sale, viz:

HORSE { Endless Chain or Tread, for 1, 2 or 3 horses.
POWERS { Levers or 2, 4 or 6 horses.

THRESHERS { With Separator and Fan attached.
 { With Separator only.
 { Without Separator.

Wheat Fans, Corn and Cob Crushers, Corn Shellers of various kinds, (very superior) Cutters for Hay, Straw and Fodder, (Richardson's patent) Cornstalk Cutter and Grinder, (a new and the best article in use) Horse Rakes; Smut and Garlic Rubbers, (which is unequalled for its simplicity of structure and thorough operation on Wheat or Buckwheat) Clover Seed Hullers; Ploughs of several kinds, but only such as are known to do the best work; Harrows and Cultivators, and various smaller Implements for Garden and Field use.

Mumma's patent CONCAVE CYLINDER CORN SHELLERS, either for power or hand. It received at the late Fair in Balt. the first premium over all others. The peculiar structure of the Cylinder, allows it to take the end grain off the cob cleaner than any other machine, also separating the shelled corn and cobs. Also the Vertical Cylinder Corn Shellers, (all cast Iron and of great strength) which will shell 100 bushels per hour.

The subscriber would now respectfully call prompt attention to the securing for the ensuing harvest, (which promises to be very heavy) a Horse Power and Threshing Machine, either with or without Cleaner, which for simplicity of arrangement, superior structure and materials, and cheapness of price, have never been equalled in this market.

N. B. Address me in Baltimore, or at my residence, New Windsor, Carroll Co., Md. jyl JAS. C. ATLEE.

Peruvian Guano, versus Kentish's Prepared Guano.

TESTIMONY of Dr. J. H. Bayne, of Prince George's Co. Md., a well known and intelligent agriculturist. Extract of a letter from E. B. Addison, Alexandria, Va.

"Dr. J. H. Bayne authorizes me to say, that in the spring of 1850, he planted his potatoes, side by side, as follows: on a given number of rows he used Poudrette, on a like number, African Guano, Peruvian Guano, and your Prepared Salts. The first two were diseased, but with the Peruvian and your Prepared Guano it was "neck and neck." He pronounced yours, "an excellent article and esteems it highly."

Norfolk, Va., 3d July, 1850.

Sir:—I have used your Prepared Guano on peas and potatoes, with great success, and I give it the preference to any manure I have ever employed. E. M. MARCHANT.

To Mr. C. A. Kentish.

I would also refer to the following, amongst hundreds of other gentlemen, as to the superiority of my Prepared Guano.

Hon. Wm. C. Bradley, Westminster, Vt.

W. O. Platt, Editor of the Vermont Phoenix, Brattleboro' Vt.

Church Miller, Brattleboro', Vt., on Corn.

Cuth Perkins, near the Court-house, Fairfax Co. Va., on Corn.

POTATOE ROT.

White Plains, Westchester Co., N. Y.

I have used "Kentish's Prepared Guano" this season on potatoes. My crop was large and all sound. Where I did not use it, the potatoes were all rotten and worthless. My neighbors also, who have not used this Fertilizer, have not raised a saleable potatoe this year. I consider it a preventive of Rot. G. FREAUT.

Sept. 28, 1850.

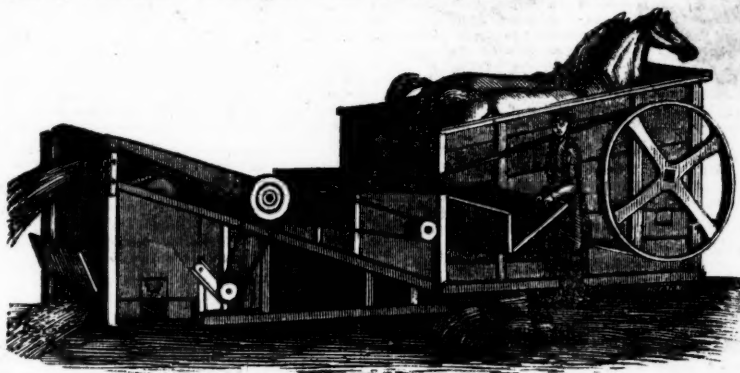
Price, \$20 per ton, for sale by CHAS. A. KENTISH, 40 Chest Slip, N. Y. City.

LIME.

THE subscribers are prepared to furnish Building and Agricultural Lime at the depot on the Back Basin, corner of Eden and Lancaster-sts., which they will warrant to give satisfaction, it being burnt from pure Alum Lime Stone, equal to any found in the United States. Orders may be left with WILLIAM ROBINSON, No. 15 Hollingsworth-street, near Pratt.

if FELL & ROBINSON, City Block.

Whitman's Premium Wrought Iron Rail-way Horse Power and Thresher.



At the great Maryland State Fairs held at Baltimore, 1849 and 1850, there was the largest exhibition of HORSE POWERS and Threshing Machines ever exhibited in this country, and all thoroughly examined and tested by a large and competent committee, who awarded the First Premium for two years to the above Power, as the BEST on the ground. More than five thousand of these Powers are now in use by many of the best farmers in the country, and they consider them to be double in power to any Sweep Powers, more durable, and much easier for the horses. Price \$100. Only for sale by

je. 1

E. WHITMAN, JR. & CO., Baltimore, Md.

DRILLS---DRILLS.

Our success in the sale of Wheat Drills last season, and the universal satisfaction which they gave in their performance, will cause others no doubt this season to wake up in this matter, who will be out with long puffs and certificates of the merits of their new Drills. But farmers will do well to bear in mind that among the great variety of Wheat Drills introduced into this State, Pearson's, and the Messrs. Pennock's Drills, are the only ones which have been used successfully—both of which are for sale by

je. 1

E. WHITMAN, JR. & CO.,
Corner of Light and Pratt streets, Baltimore, Md.

Bddy's one wheel wrought iron Horse Power.

THE most simple, durable and easiest draught Power in the world, for 3, 4, 5, 6 or 7 horses. It being made of wrought iron, there is no danger of

its being broken or worn out by use. It can be taken down, or put up in ten minutes time, and easily transported in a one horse cart. It may be worked in the open field, or under cover, as the farmer may desire, and is one of the greatest improvements of the day.

We have enlarged and very much improved it since last season, and can recommend it to the farmers as a superior article, and one that we have not the least doubt they will highly approve.

For sale by E. WHITMAN, Jr. & Co. Jun 61

GACHEL'S Patent WATER RAMS.

FOR SALE at E. Whitman, Jr. & Co's Agricultural Establishment, No. 55 Light street. J. Hewes & Co., corner Pratt and Frederick sts., Baltimore, Md. These machines are cheap and durable; will elevate a constant stream of pure water any height or distance required, without labor. Any amount of references can be given as to their reputation, simplicity, durability, &c.

The patentee is prepared to furnish all sizes of machines, with Lead, Cast and Wrought Iron, Glass or Cement Pipes, and to erect the same with neatness and despatch, in any part of the United States. All work warranted, or no charge. Address, describing location, &c.

J. L. GACHEL, Elkton, Md.

Or I refer, by permission, to Samuel Harris & Sons, Exchange Brokers, or Robt. A. Taylor, Baltimore, Md. je. 1-41

BOOKS ON AGRICULTURE, for sale.



AGENCY FOR THE PURCHASE AND SALE OF IMPROVED BREEDS OF ANIMALS.—Stock Cattle of the different breeds, Sheep, Swine, Poultry, &c. purchased to order and carefully shipped to any part of the United States—for which a reasonable commission will be charged. The following are now on the list and for sale, viz:

Thorough bred	Short Horns and	Grade Cattle
Do	do Alderney	do do
Do	do Ayrshire	
Do	do Devons	do do
Do	do South Down	Sheep
Do	do Oxfordshire	
Do	do Leicester	

Swine and Poultry of different breeds.

All letters, post paid, will be promptly attended to. Address

AARON CLEMENT,

Cedar st., above 9th st., Philadelphia.

Philadelphia, July 9th, 1851.

Aug. 1

New Oxfordshire Sheep



THE subscriber will have for sale, deliverable in August and September next, about 25 Lambs, of the *New Oxfordshire*, or *Cotswold* breed of Sheep; the subscriber in person selected his breeders from the flock of *Clayton B. Reybold, Esq.* at a high figure, and feels confident that his flock is unsurpassed by any other in Maryland. Price \$15 to \$20. Enquire of Mr. Sands, at the office of the "Farmer," who will receive orders for them, or to

WILLIAM JESSUP,
near Cockeysville, Balt. Co., Md.

New Oxfordshire Bucks For Sale.



THE subscriber has a number of yearling and two year old BUCKS, which he will sell any time when called for, and has no hesitation in saying this breed of Sheep are superior to all others for large carcasses, heavy fleece, early maturity, constitution; and defies all competition with other breed. For profit. This flock (which has been bred from some of the best ever imported) is so well known they need no further description than to say, that the sire clipped 18 lbs. of washed wool, and weighed 361 lbs. alive. Gentlemen are invited to call and see for themselves, or communicate by mail. Direct to

CLAYTON B. REYBOLD, Delaware City, Del.

Orders received for the above by Mr. Sands, at the office of the American Farmer, who will attend to their shipment.

May 1-51

FOR SALE.



20 BUCK LAMBS of the *COTSWOLD* or *NEW OXFORDSHIRE* BREED, deliverable in Baltimore after 1st August, prox.

For several years past, great care has been given by the subscriber to the selection of his breeding ewes, part of which, and the Rams, have been selected from the celebrated flock of *Clayton B. Reybold, Esq.* of Delaware. Price \$15 to \$20, according to choice. For further particulars enquire of S. Sands, editor American Farmer, or

may 1-51*

Westerman's Mills P. O. Balt. Co. Md.

Full Bred Cotswold Bucks For Sale.



20 FULL BRED COTSWOLD BUCKS, 2 years old, bred from Col. Ware's best stock, for sale—price from \$30 to \$50, according to selection, put up in crates ready for transportation. Application to be made to

CHAS. CARROLL, Daughogran Manor,

near Ellicott's Mills, Md.

Or to Sam'l Sands, at the office of the American Farmer.

The North Carolina Star, at Raleigh, and the Lancaster, Pa. Intelligencer, will publish the above four times, and send bills as above. May 1-51

AGRICULTURAL IMPLEMENTS.—LABOR SAVING MACHINERY.

—GEORGE PAGE, Machinist & Manufacturer, Baltimore st. West of Schroeder st. Baltimore, is now prepared to supply Agriculturists and all others in want of Agricultural and Labor-saving MACHINERY, with any thing in his line. He can furnish Portable Saw Mills to go by steam, horse or water power; Lumber Wheels; Horse Powers of various sizes, ranging in price from \$65 to \$200, and each simple, strong and powerful. His Horse Power & Thrashing Machine, he is prepared to supply at the low price of \$125 complete; the Thrashing Machines, without the horse power, according to size, at \$30, 40, 65 and \$75; Improved Seed and Corn Planter Portable Tobacco Press; Portable Grist Mills complete, \$165

LIME—LIME.

THE undersigned having purchased of E. J. Cooper the most extensive Lime Burning Establishment in the State, is now prepared to supply Agricultural and Building LIME, of superior quality, to farmers and others, on accommodating terms, from his Yard, at the City Block, or delivered at the several landings on the Chesapeake Bay and its tributaries, and pledges himself by strict attention and punctuality, and a determination to do justice, to merit a liberal share of patronage. Any orders addressed to him through the Baltimore Post Office, or left with C. W. HUGHES & Co., No. 60 South street, one door above Pratt, will be promptly attended to. Feb. 1-ly* JAMES L. SUTTON.

BENJAMIN WILLIAMS,

Commission Merchant and Dealer in Wool,
No. 126 Lombard street, between Charles and Light street, BALTIMORE.

CASH and the highest market price paid for all descriptions of WOOL, and DRIED SHEEP SKINS. Wool and Country Produce received and sold on commission. Refer to—

Messrs. Duvall, Keighler & Dorsey,
" Duvall, Rogers & Co.
" Wm. Woodward & Co.
" Thos. Whitridge & Co.
" William Cooke & Sons,
" Ward & Brothers,

BALTIMORE.

Mr. George Williams,
Messrs. J. D. & M. Williams, } Boston.
Mr. John Williams, }

Je. 1 6th

R. B. PORTER.

J. F. TOWNER.

PORTER & TOWNER, WOOL DEALERS, AND

GENERAL COMMISSION MERCHANTS.

AGENTS for the sale of Rees & Hoyt's Patent Premium Riveted Stretch-d Leather Bands, Vulcanised Rubber Bands, Ho-e, Steam Pipe Packing, &c., Smith's, Braziers and Founders' Bellows; Tinners' Tools and Machines; Wool, Warps, Bands, Cards, Soap, Oil, Leather, Cloth, Shingles, Reeds, &c. Machinery of all kinds bought or sold on commission.

No. 342 Baltimore street, Baltimore.

Porter & Towner will always give the full market price for all description of WOOL, and solicit growers to give them a call before selling their Wool. Je. 1-31

JAMES BAYNES, Wool Dealer,

Warehouse No. 105 Lombard st. near Calvert, Balto. IS prepared at all times to give a fair market price for WOOL of all descriptions. He would recommend to farmers to be more particular in washing their Wool, and in getting it in good order before bringing it to market, to ensure them a fair price. The demand is good, and the probability is, that it will continue so the coming season. Those having wool to dispose of, are invited to give him a call before disposing of their fleeces. Any information as to putting it up for market, &c. will be freely given.

References—B. Deford & Co., and Wethered Brothers, Baltimore—Jas. Mott & Co., and Houston & Robinson, Philadelphia. Ap. 1-lyr

GROUND BONE.

THE subscribers have commenced grinding, and will keep constantly on hand, Ground Bone of superior quality, being all fresh, gathered daily, from the various Market and Slaughter houses of this city (an exclusive privilege of our own,) and warranted free from Chemical, or any other process, or impurity, which has a tendency to diminish their Fertilizing qualities. Orders left with Messrs. Geo. C. Collins & Benson, 83 Light-st. Waarf, or at the Factory, opposite the outer Depot of the Baltimore and Ohio Rail Road, will meet with prompt attention.

P. S. Samples at the office of the American Farmer.

COLLINS & BULLOCK,
Glue and Neats-foot Oil Manufacturers,
Columbiastreet.

Je. 1-41*



A. S. MOTT, AGRICULTURAL IMPLEMENT MANUFACTURER,

No. 38 Enoch street, near the Belair Market, Baltimore. Plows, Cultivators, Harrows, Wheat Fans, Straw Cutters, Grain Cradles, and all of the best and most approved Agricultural Implements in use.

AGENTS for the celebrated N. York Wiley and Empire Plow Castings. mar 2

AMERICAN FARMER.

BALTIMORE, August 1, 1851.

PRIZES FOR THE SEVENTH VOL. OF
THE AMERICAN FARMER.

To encourage and stimulate our friends and the well wishers of agricultural improvement, in their endeavors, we offer the following prizes for the largest lists of subscribers, to be received up to 8 o'clock on the first evening of the meeting of the State Agricultural Society, at its annual meeting the ensuing Fall—viz:

PRIZES OFFERED.

For the largest list of subscribers,	\$50
" 2d largest list,	35
" 3d do do	25
" 4th do do	15

The subscriptions will be received at the club prices offered by us below, the cash for which must be paid before the time at which the competition closes. Thus, those who may obtain lists at the regular subscription price of \$1, if they will make up a club of 6, will be furnished the same at \$5

" 13, do do	10
" 30, do do	20

One feature of the above offer to be noticed, is, that the names and cash of any who are now subscribers, will be received—heretofore it has been confined to new subscribers only.

The Prizes will be paid in cash, or in silver ware, or in any agricultural implements which may be exhibited at the State Exhibition, at manufacturer's prices. The names as received can be sent on, with the cash, and the number will be counted on the day specified, and announced at the time of the giving out the prizes of the State Society. All orders to be addressed to

SAML. SANDS, Publisher,
128 Baltimore street, Baltimore, Md.

ADVERTISING IN THE AMERICAN FARMER.—The following are the rates for advertising in this journal, which will be strictly adhered to, viz:

For 1 square, not exceeding 12 lines of the usual advertising type, or for similar space, if bolder type is desired, or used, for each insertion, \$1, and a proportionate rate for larger advertisements—no deduction will be made for any additional number of insertions, unless a contract by the year is made.

For 1 square, per ann., \$10.

" 1 column, do. 30.

" 1 column, do. 50—larger advertisements by yearly advertisers, in proportion.

Postage.—It appears we were in error in stating that the "Farmer" was to go free thro' the post in Balt. Co.—The new post office law grants this privilege to weekly papers only, consequently agricultural publications, which are nearly all monthly, have been overlooked. This is as usual, with our legislators—the agricultural interests are always sure to suffer by neglect. This must be remedied.

HON. DANIEL WEBSTER.—At the last meeting of the Board of Managers of the Maryland State Agricultural Society, a committee was appointed, of which the President was chairman, to wait upon the Honorable Secretary of State, to invite him to deliver the Annual Address at the Exhibition of the Society to be held this Fall in the city of Baltimore; and it gives us great pleasure to be able to announce that he has accepted the invitation.

We have received from Mr. Rich'd Pim, of Downingtown, Pa., a sample of wheat, which he requests us to compare with the Coad variety—the head and grain are not so long as the latter, but more compact; the berry is plumper, and the beard shorter. Mr. Pim informs us that he obtained the seed from Burlington, N. J., and it has produced over 40 bushels to the acre, and the crop this year is heavier than any that he has grown of it. Mr. P. says he can furnish about 200 bushels for seed, besides the quantity he has engaged to his neighbors. Just as we were going to press, we received several varieties of wheat from Gen. Chapman, which are worthy of attention.

Mediterranean Wheat.—Messrs. Levering & Son, it will be seen by their advertisement, are expecting a direct importation of this favorite and almost universally successful variety of wheat, direct from Leghorn. Those wishing to obtain a supply are recommended to apply early to the importers.

"Foxwell" Wheat.—Mr. R. N. Milburn, of this city, has left with us a sample of wheat, to which this name has been given, which we think fully equal, if not superior, to any we have ever seen. Some of the stalks can be seen at our office, and as Mr. Milburn and Mr. Foxwell have given all the particulars about it in their advertisement on another page, we can only invite the farmers to an inspection of it, and to the following offer made by the agent of the grower:

BALTIMORE, July 30th, 1851.

Mr. Editor:—As there are several varieties of Wheat claimed as the best, I am anxious to have the quality of the best varieties tested—so I propose to send to you \$25, and one bushel of the Foxwell wheat, to be put in competition with any other varieties that may be offered; the other competitors to deposit \$15 and one bushel of wheat, to be seeded on one acre of medium land by a person appointed by you, and under your direction as to mode, &c., and when the yield is ascertained, the variety which is best, shall have all the product—the money deposited to defray all expenses, and if any balance, to be laid out in wheat of the best kind at \$1 per bushel, to be distributed in small quantities by the Agricultural Society. All deposits to be made by the 25th of August, and the names of depositors, and kind of seed, to be published in the Farmer of Sept.

Yours respectfully, R. N. MILEBURN.

The Fall Exhibition will, we are at liberty to promise, be on a scale unequalled by any which has preceded it.—The site is not yet designated, but we are expecting daily to have it in our power to announce it.—That and other important particulars in regard to the Show, will be made known in our September No.

Farmers require clothing as well as other people, and there is no reason why they should not have it as good.—Therefore those who wish to renew their outward man when they visit our goodly city, we would most particularly refer to the advertisement of our friend Morling, on another page, at whose establishment they can be fully equipped, and we'll warrant on as good terms and in as handsome a style, as at any other establishment. We commend him to the patronage of the public, as worthy of all confidence:

Rock Salt.—Mr. Mankin, it will be seen, will be constantly supplied with this article, with which every stock raiser should be supplied.

The Crops.—Our accounts from all quarters confirm the anticipations which were indulged from the appearance of the wheat before harvest—that of a larger yield and of better quality than any crop which has preceded it for many years.—The expectation that those who were the first ready, would obtain the best prices, has caused a heavy amount to be thrown into the principal markets, and hence the prices have materially declined.—Whilst we would recommend to the farmer the importance of having his grain thrashed out, and ready for market, yet he will always find that a great rush is made directly after harvest, as many are obliged to sell early, to meet their engagements, and raise the means to defray their harvest and other expenses, and to prepare for their fall crops.—Prices generally find their level about October or November—yet it often occurs that a demand springs up at an earlier day; and if the farmer is prepared to take advantage of it, he may realize better prices.

The Oats crop will be short, in most of the southern and eastern sections of our state, where the drought has been excessive and long continued; and tho' we have had some refreshing showers, they were of short duration,* and were immediately succeeded by a most intensely hot sun, which has parched the earth so as to materially injure vegetation of every description, and particularly the

Corn Crop, which will certainly be a failure in many quarters, as it is now beyond the hope of redemption.—This crop has also been seriously affected by worms and insects of various kinds.—The same causes have also continued to injure the

Tobacco Crop, which will have disappointed the expectations formed early in the season, when preparations were made for a large crop.—Prices, it will be seen, are firm, and the prospect good.

[*After this was written, we had a good rain on the 30th and 31st ult.]

Pennsylvania Sheep.—Mr. Benj. Hood, of Chester Co. Pa., whose stock at the Cattle Show last Fall excited much attention, sends us a memorandum of three sheep raised and fed by him, which were slaughtered in Feb. last—the largest, 3 years and 10 months old, neatly dressed, weighed 234 lbs.—the other two, were twins, one year younger, one of which weighed 202 lbs, and the other 192 lbs.—We hope Mr. Hood will be with us again this fall, with many of his neighbors from the rich region in which he is located.

Amongst other communications, we have one on hand from Dr. Muse, of Dorset, which will be published in our next.

REVIEW OF THE TOBACCO & GRAIN MARKETS.

Reported for the American Farmer by J. W. & E. Reynolds.

During the past month there was considerable activity in the Tobacco market, and most of the Tobacco not withdrawn has been sold at fully as good prices as any we have obtained since last March. The market is now almost bare, and consequently sales are very limited. Planters having completed their grain harvest, and finished as far as practicable planting their crops of Tobacco, will now, we suppose, send the balance of their crops of Tobacco in, and it will, we hope, find a firm market. We quote sales of common dark crop and second frost-
ed at \$4 to 4½; sound Middling \$5 to 5½; fair to good \$6 to 7; fine to very fine \$7½ to 10.

Grain.—Wheat has declined since the opening of the market for new crop 10 to 15c per bush. Sales are making at 75 to 83c for good red; common to

good white 80 to 86c, and suitable for extra family flour at 90 to 95c. Yellow Corn 58 to 60c; white Corn 62 to 63c. Rye 62 to 65c. Oats 35 to 42.

Cattle.—The offerings of Beeves at the scales on Monday last, reached 1100 head, of which number 700 were sold to city butchers, 70 were left over unsold, and 330 were driven to Philadelphia. Prices ranged from \$2.37 to 3.12½ on the hoof, equal to \$4½ a 6 net, and averaging \$2.68 gross.

Hogs.—We quote from \$5.75 to 6.25.

Flour.—We note sales fresh ground Howard st. Flour, from old wheat, at \$4.12½; City Mills, new, at \$4.25; sales of Patapsco Family Flour at \$5.50; and of extra at \$4.75.

Whiskey.—Barrels are in fair demand at 24 cents, while hhds. are dull at 23 cts.

Wool Market.—by Jas. Baynes.—Wool for a few weeks past has been coming in rather more freely, but the prices are scarcely maintained, in consequence of our eastern markets being dull—the prices are tending downward. The manufacturers say they can scarcely afford to give the prices, as goods remain so low, in consequence of vast quantities coming in from foreign countries. The following are the quotations: Merino full blood 40 to 45; do ¾ do 37½ to 40; do ¼ do 33½ to 35; ¼ and common 30 to 33½; unwashed 21 to 23.

Guano.—Large sales and contracts are being made deliverable in August and Sept. and the demand will probably equal the supply in these months.—One of the largest dealers in the city assures us that it will be scarce before 1st Oct. and "that it is already getting so." The following are the selling prices in this city, viz:

Peruvian, single ton of 2000 lbs.	\$46 a 49
Do 2 to 10 tons, per ton of 2000 lbs.	46 a 47
Do 10 to 30 " " "	45 a 46
Do 30 to 50 " " "	45
Do 50 tons and upwards, per ton of 2240 lbs.	50
Patagonian Guano,	37 a 38

A CARD.

GEO. W. MORLING would most respectfully inform his friends and the public generally, that he has taken Store 259 BALTIMORE ST., corner of HANOVER, where he intends keeping a general assortment of fashionable Ready Made CLOTHING.

Wm. S. Hinds, a gentleman of much practical experience, will attend to the execution of the mechanical department, and will make up to order in the best and most fashionable style, every description of Gentlemen's Clothing.

Those of my friends and the public who may favor me with their business, are assured that every effort will be made to give them satisfaction. Always on hand a general assortment of CLOTHS, CASSIMERES and VESTINGS. aul

Leached Ashes,

WARRANTED OF BEST QUALITY. The unleached Ashes selected with great care, and leached without any mixture except lime. Sold at less cost than any others in the market of equal quality.

The best references can be given if required. Apply to
GRISCOM & BURROUGHS,
City Block, Fell's Point.

Aug. 1-2t*

A Card to Farmers.

THE subscriber would respectfully inform Farmers and others interested, that he is now manufacturing a "FERTILIZING COMPOUND" of very superior quality, (the base being Bones dissolved in Sulphuric Acid, with the addition of Soluble Salts of Ammonia, Potash, Soda, Magnesia, &c.) and offers it for sale in quantities to suit purchasers, at \$3 per barrel of 300 lbs., and warranted of great fertilizing power and durability.

WM. TREGO, Manufacturing Chemist,
Office N. W. cor. Baltimore and North sts.
aug. 1-4t* Factory on Hughes st. S. side of Basin.

THE FOXWELL WHEAT.

St. Mary's Co., Md., July 29, 1851.

DEAR SIR:—I have forwarded to you some of my new variety of yellow wheat, which I wish you to sell for seed. I shall continue to send it to you as you may direct, as you will be my only agent for its sale,—you can exhibit it in market, and its quality will be its recommendation. In 1847 I received part of two heads, and they contained 72 grains, which I seeded, and the product in 1848 was 2½ pints, or 2 lbs.—the product in 1849, was 3 bushels; one bushel of which was distributed for show samples, &c., and I seeded 2 bushels on common wheat land, and the product in 1850 was 52 bushels—2 bushels I sold Mr. Elijah Taylor of Balt. Co., 5 bushels I had seeded on Mr. G. H. Smith's farm, near me, as it was better wheat land than mine; the balance I seeded, and the product is estimated at 1000 bushels. I shall not give you a further description, as you have been conversant with its growth since I commenced its cultivation. It will be well cleaned and put up in one and two bushel bags, and delivered in Baltimore at \$4 per bushel, without charge for bags.

Yours respectfully, JAMES L. FOXWELL.
To R. N. Milburn, Com. Merchant, Baltimore.

I seeded 1 bushel and 3 pecks of Wheat, bought of Mr. Foxwell, of St. Mary's Co., on Mount Pleasant Farm, Balt. Co. It was seeded late, under many disadvantages. I have not the wheat thrashed, but may safely say there will be 50 bushels, and I am so much pleased with it, that I shall seed the most of what I raised.

July 28, '51.

ELIJAH TAYLOR.

The above described WHEAT can be seen at my Counting Room, No. 55 Light street, second floor of E. Whitman, Jr. & Co.'s Agricultural Ware Rooms, where I shall be pleased to receive orders. I am gratified to be able to recommend this variety of wheat, as it has been grown for four years with such success, and under such circumstances, that give the best assurance of its value. My personal knowledge of all the circumstances, enables me to say that the soil of Mr. Foxwell's land, on which this wheat has been grown, is far from a good wheat soil, and of common tilth, and that the two last years it was not well manured, though the yield in 1850 was 26 for 1, and the crop of this year is said to be as good—the wheat is not subject to rust, as his entire field was destroyed (except this variety) by rust in 1850, and this was not much affected. I have exhibited samples to some of the best millers here, and their opinion is, that it is equal to the best reds. I have conversed with Mr. Elijah Taylor, who obtained the small lot late last fall, and he gives the result in his note above. I think it needless to say more, as the facts stated in Mr. Foxwell's letter speak for themselves. All orders addressed to me in time, will meet with prompt attention, if accompanied with the cash, or draft on a city house.

Also, the celebrated COAD WHEAT, for sale, raised from seed obtained last year—price \$4 per bushel, in sacks.

PERUVIAN GUANO, ASHES, and all other Manures and Seeds, furnished to order at lowest cash prices, as well as all other orders and consignments in the Commission business attended to with despatch.

R. N. MILBURN.

Aug. 1, 1851.—11

Improvement in Chappell's Fertilizer.

UP to the present time, we have been particular to have our Fertilizer made up from the same Recipe or Formula, so that it should be uniform in quality. We have, however, always considered, that the most active and valuable constituents, were the Bones dissolved in acid, and the Alkalies. We have, therefore, concluded, hereafter, to make some alteration in its composition, by adding, considerably of these materials,—and though at an augmented cost, the increased value of the compound, as a manure, will, we hope, by increasing the demand, more than compensate for the additional cost.

It will be found on examination that the Barrels contain the full weight of 300 lbs.,—also, that they contain a much larger quantity of acidulated BONES, and other soluble Salts, than any other compound now offered for sale, under the name of Agricultural or Chemical Salts.

This compound of "inorganic materials," has sometimes produced the most surprising results, as a fertilizing agent, not only greatly increasing the crop on which it was used, but the second crop, also, has shown that the Salts have not been exhausted by the first. In some other experiments, it has entirely or partially, disappointed the parties using it. In such cases, we are satisfied, that some cause has intervened, prejudicial to its favorable action—when the soil has been too sandy, and permitted the salts, as dissolved, to filter through it, beyond the reach of the roots of the plant—or there has been too little rain or moisture in the soil, to prepare them in sufficient solution to be absorbed by the growing plant; or, heavy rains falling soon after their application, has not only dissolved the more soluble portions, but has washed the salts from the soil. This, we have no doubt has been frequently the case, particularly in the spring, when used as a top dressing. If the salts can be secured in the soil, it is impossible for it to be used without favorable and remunerating results; if not on the first crop, owing, as stated, to the absence of suitable weather, it is certain to benefit the second crop;—this has occurred over and again.

Experience has shown us, that we can calculate with more certainty, that it will act favorably on Wheat or other fall sown grain, than if used in the spring, on corn or oats, or as a top dressing, but for this reason only—the winter rains secures its solution—and the frost pulverizes and mixes the ingredients with the soil. It has been found advantageous when used as a top dressing, either on wheat or meadow land, to use the harrow—the use of the harrow will also benefit the wheat or grass, so we are informed by several farmers of experience.

To those farmers who have used the Fertilizer, without deriving the benefit anticipated, and therefore discouraged to a further trial, we say, the same disappointment often happens with Guano, and other manures. Try it again, if only a small quantity—Procure 2 barrels, prepare an acre of the poorest land on your farm, impoverished, but otherwise suitable for cultivation—let the land be well ploughed and harrowed, and made soft and porous, and put in proper order for the reception of the crop—sow it in Wheat or Rye, and harrow, or plough in the seed and Salts together, so as to cover them in the soil—In the spring, sow clover seed, and our word for it, there will be no disappointment, either in the crop of wheat or clover, and should the season prove favourable, you will be surprised at the result of the experiment.

We add a few new certificates, and letters of recommendation—We could add others, but this mode of advertising is expensive—These, with the great number we have heretofore published, should be sufficient to recommend the fertilizer to the favourable notice of all agriculturists desiring to improve their land.

We depend for sales, principally on those who have used the salts successfully—We have some large customers, some who have taken from 70 to 100 barrels each year, for 3 years past, and going to purchase again this fall—The article we shall furnish, we consider greatly improved by the additional quantity of acidulated bones and alkalis. We therefore recommend it with increased confidence, believing that the application of the Fertilizer this fall to wheat, will not disappoint any who may be disposed to give it a fair trial—on land at all liable to wash, we would recommend ploughing in the salts, so as to secure its being covered in the soil.

PRICE, \$3 per barrel, containing 300 lbs.

P. S. CHAPPELL,
Manufacturing Chemist.

Office, 158 Lombard st. Factory, Cross st.
August 1, 1851.

N. B.—We fear the present drought will prevent the salts from acting as favourably this season on corn, potatoes, &c. as it otherwise would have been. They will be of little service on any crop, unless sufficient rain falls to secure their solution—hence it is always safer to apply the salts when the land is first ploughed, early in the spring.

DR. CHAPPELL—I am now convinced that your Salts act as well on the second crop as the first. As you will see by my letter last fall, I used your Salts on about twenty acres land, two barrels to the acre. The land (as all my neighbors know) was very poor. My crop of Corn was as good as I could have expected, it having been very much injured by the severe N. E. storm in August; certainly the Salts produced the most surprising results. The same piece of land I sowed in Rye. One of my neighbors offered to bet me, that he would raise two bushels to my one, (his land is in good order), and what do you think? My crop has proved that I get over two bushels to his one. All my neighbors have expressed great surprise, and say that your Salts appear to be exactly what is wanted to improve their poor lands. I have just cut the Rye, which proves a very heavy crop. The Salts have produced a most wonderful effect on this old field. I have lost by cutting it too soon, but it stood so heavy, I feared a storm; if it had occurred, it would have fallen down, and my loss would have been reater.

I have used the Salts this year on my Corn. So far, it looks very fine, though it is suffering from drought.

The old field I had in Oats last year, on a part of which I used your Salts—two barrels to the acre—shows a very decided difference in favor of that part of the field.

Your Salts and Guano are running a race in my neighbor Belmier's field of corn; since the drought, both have stopped, though I think the Salts, so far, have the advantage.

From the use of your Fertilizer last year, on Corn and Oats, I derived great benefit, though not as much as it would have been had not the storm injured the crop, but I must say, that I had no idea I should have found it so beneficial to the second crop, as I can say with truth, my Rye is the best crop in the neighborhood—it surprised myself and all my neighbors. If the season should prove favorable, I shall make a larger crop of Corn to the acre, this year, than I did last, though the land is very poor. I have used two barrels to the acre.

Respectfully, &c. Wm. HORN.

Near Millersville, Anne Arundel Co., June 8th, 1851.

Calvert Co., April 5, 1851.

DEAR SIR—The ten barrels of Fertilizer I purchased of you last spring, I put to two barrels of the black dirt to each barrel of Fertilizer. After having it thoroughly mixed, I put a common tea-cupful to each corn hill; and my crop from the same land was more than double, although my corn suffered severely from the storm we had about the 30th of August. I also used Peruvian Guano on part of the field, but the corn was not so good as where I used your Salts. I intend to use the Fertilizer again this year, fully satisfied that it pays well.

Yours respectfully,

L. L. WEENS.

The following letter is from the Rev. Dr. Johns, Rector of Christ Church, Baltimore. He also used a few barrels last year on corn, with decided advantage, and has purchased this year for his corn crop.

Baltimore, July 2, 1851.

TO DOCTOR P. S. CHAPPELL—Dear Sir: I have just returned from a visit to Delaware, where I had an opportunity of observing the effects of your Agricultural Salts, in the production of wheat. They were applied to two fields—one of twenty acres—the other of twenty-eight. The former is uniformly good—on the latter, a part has been damaged by the growth of blue grass, but my impression is, the crop, on both, will be one third greater than it would have been without the fertilizing article. The grain has not yet been threshed out, and consequently the above opinion rests merely on general observation of the crop immediately before harvest, but I am satisfied it will not be found incorrect. I think it very certain you will have several orders for the Salts, from the vicinity referred to.

Very respectfully,

Your friend and ob't serv't,

HENRY V. D. JOHNS.

Dr. Johns purchased last fall, thirty barrels; as he used it as above on forty-nine acres, not more than 1½ bbls. could have been applied to the acre.

"Baltimore Manual Labor School," July 17, 1851.

P. S. CHAPPELL—In answer to your letter just received, I would state, that I used your Fertilizer last fall upon Wheat, alongside of Peruvian and Patagonian Guano, at the same cost per acre, to test the relative value of each article as a manure, and saw no difference in the result. I have just harvested the wheat, and judge the crop will yield twenty bushels to the acre, the land being only in tolerable heart.

Yours respectfully,

NICHOLSON VANSANT,

Superintendent.

Hopewell Cot. Works, July 3, 1851.

MR. P. S. CHAPPELL—Dear Sir: Your favor of the 8th ult. was duly received, and would have had an earlier reply, but we were waiting to get information from several persons who had your Salts last fall through us. As it regards what we put on ourselves, we cannot report as favorably as we would desire. Our crop of wheat is increased somewhat by them, but not as much as we expected. The field however on which they were put, was pretty good previously, and, therefore, the effects of the Salts would not be so manifest as though it had been poorer. We thought we derived more benefit from those we applied the previous year, the wheat on the part of a field on which we put them, being as good as the part on which barn-yard manure was put, and the clover this season, following the wheat, was very heavy.

One person who had 12 barrels of the lot we got last fall, says he applied them to a very poor field, which would not, of itself, have brought more than the seed, and he will have about half a crop off it—say 10 bushels to the acre. Another, who had 10 barrels, says his crop of wheat is greatly increased by them—he thinks doubled or more. J. B. Ramsey, who had some 20 bbls. or more of the lot we got, thinks his crop of wheat off the field on which he applied them, is greatly increased, perhaps doubled.

We presume there will be more wanted this fall by some of those who got through us last fall. We have not yet determined whether we will apply any ourselves this season or not. Our land is generally in a pretty high state of cultivation, and we shall have a large quantity of stable manure and compost this fall, probably sufficient to go over our wheat ground.

Respectfully, yours, &c.

S. J. DICKEY & BROS.

Baltimore Co., September 13, 1850.

P. S. CHAPPELL—I used seven barrels of your Fertilizer last fall on my Wheat, and I am convinced that each barrel made at least six bushels more than I would have got without it. I have been so well pleased with it, that I have bought a barrel for each acre for wheat this fall.

Respectfully, &c.

VACHEL W. BASEMAN.

TO DR. CHAPPELL—I have used Chappell's Fertilizer on my farm in Howard District. My first experiment was on Wheat, on tobacco ground; I used one barrel on half an acre, adjoining I put Peruvian Guano on half an acre, at same cost. I noticed that the wheat did not grow as high where I put the Salts as the Guano, yet the head was fully as large, and the quantity of grain equal.

My second experiment was on 1½ acres very poor land, on Buckwheat—1½ barrels Salts used on the 1½ acres, or at the rate of 1 barrel to the acre. I got from this piece of land 30 bushels Buckwheat. I tried also, a small experiment on Potatoes, the size of which was very much increased by the use of the Salts. What I now purchase I am going to use on Wheat.

CALVERT SHEETS.

Howard Dist., near Cooksville, Oct. 4th, '50.

We clip the following Editorial from the "Baltimore Sun" of the 17th July.

Mr. Crow is one of the Editors of the Sun, and we think has acted wisely in having tested for himself the relative value of the manures mentioned. Experiment is the only test by which the farmer can decide.

One important fact has been demonstrated by Mr. Crow, that "Chappell's Fertilizer," on very poor land, can produce a good crop of Wheat suitable for Seed.

FINE SAMPLE OF WHEAT.—One of the most beautiful samples of wheat we have seen this season, is from the farm of John T. Crow, about five miles from Washington. It is of the white variety, and better developed, plumper grains never were produced, and a cleaner article could not be grown. As an old farmer remarked, it is *all wheat*, and will rank high for seed. What is remarkable in regard to this wheat is, that four acres of it were grown on very poor land as an experiment, as follows: Two barrels of Chappell's Fertilizer to one acre; two of Kettlewell & Davison's Renovator to one acre; 1 barrel of the Renovator and 100 lbs. of Guano to one other acre, and 200 lbs. Guano to the fourth acre. They produced all a fair and average yield under the circumstances, the Guano, however, having somewhat the advantage, and Chappell's Fertilizer coming next. The land is also left with a fair set of clover: In this connection, we may mention that we heard a day or two since that Mr. Coad, the propagator of the famous Coad wheat in this State, had made a crop of some 4000 bushels this season, all of which had been already engaged, at \$4 the bushel, for seed. aug. 1-11

Drills---Drills---Drills.

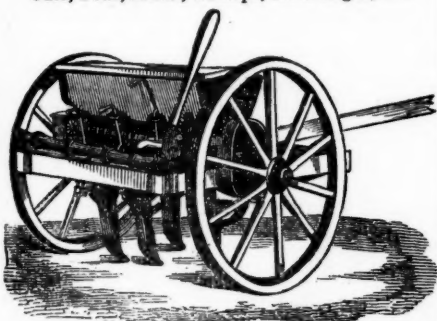
E. WHITMAN, JR. & CO. have the largest stock of **WHEAT DRILLS** on hand ever offered for sale in the United States.

Farmers in want of Drills that are perfect in their operation, will do well to call and examine their stock before purchasing, as they claim to have the only Drills that have ever been used with success in this country.

Farmers should bear in mind the danger of purchasing new Drills which have not been tested, as the whole crop may be lost by the use of an imperfect Drill. aug. 1

PEIRSON'S PATENT SEED DRILL,

For planting Wheat, Rye, Indian Corn, Barley, Rice, Oats, Peas, Beans, Turnips, Ruta Bagas, &c.



This DRILL is adapted to the various kinds of land, and is not liable to be injured by striking stones or roots. It will sow point rows, and fields of irregular shape, to advantage. It can be constructed to operate on stony land, and is so simple in construction that a boy of twelve years of age can manage it.

This machine will save 25 per cent. in seed, and 15 per cent. in labor, and cause the yield to be 15 per cent. more than by the usual modes.

REFERENCES—*Maryland*—Maj. J. H. Milburn, St. Mary's Co.; R. N. Milburn, Baltimore City; Rich'd B. Carmichael, Queen Ann Co.; William Carmichael, do.; Doctor De Coursey, do.; Colonel Tilghman, do.; Gen. T. Tilghman, Talbot Co.; Thomas Hopkins, do.; Abner Hall, Eastern, do.; William T. Griffith, Kent Co.; B. F. Beck, do.; Charles Tilden, do.; W. H. Blackiston, do.; Capt.

James S. Mitchell, Cecil Co.; Richard Semans, do.; John S. Lusby, do.; John Wroth, do.; E. W. Lockwood, do.; George W. Price, do.; Lewis Price, do.; John K. Price, do.; Nathan Tyson, Harford Co.; Charles Wilson, do.; Chester Coleman, Frederick Co.; J. Edwin Coad, St. Mary's Co.; Isaac Winchester, Kent Island; Nathan S. White, Montgomery Co.; B. W. Waters, do.; T. S. Iglehart, Baltimore; M. Anderson, Balt. Co.; W. S. Allison.

Virginia—Dr. A. B. Hooe, King George Co.; Charles Maxy, Esq., Richmond; Dr. W. F. Gaines.

Rock Salt.

LIVERPOOL ROCK SALT, constantly received by regular packets from Liverpool, and for sale in lots to suit purchasers, at sixty cts. (60) for one hundred (100) pounds, by aug. 1-11* **HENRY MANKIN**, 16 Bowly's wharf.

Seed Wheat.

THE subscribers will receive in a short time several varieties of White and Red Wheat from the *Mediterranean*, to which they call the attention of Farmers wishing to replenish that description of wheat.

They will also keep an assortment of **SEED WHEAT** and **RYE, ORCHARD and HERDS GRASS, CLOVER** and **TIMOTHY SEED.** T. W. LEVERING & SON,

No. 113 Pratt street wharf.

Who also have their full supply of Peruvian and Guano **GUANO**, warranted equal to any in the city. Persons wishing to engage to be received from on board ship in September, can do so by early application. aug. 1

GUANO.

500 TONS PERUVIAN GUANO.

150 do Patagonian do
100 do 2d quality Patagonian do.

The attention of Farmers and Planters is respectfully directed to the stock of **GUANO**, which we have in store and are now receiving by direct importations.

Our Guano is warranted to be of the very best quality, weighed and inspected by the State Inspector, and the analysis of the various cargoes which we offer for sale, prepared by an eminent chemist of this city, can always be seen at our warehouse.

Having an ample stock on hand, farmers need fear no disappointment in being supplied, if they forward their orders in season. Every attention will be paid to orders received per mail, and our prices and terms will be as liberal as any other house in the trade. P. MALCOM & CO.

Flour, Grain and Guano Warehouses,
Corner Bowly's wharf and Wood st., Baltimore, Md.
Ground Plaster in bbls., and Bone Dust. aug. 1-31

BONE DUST.

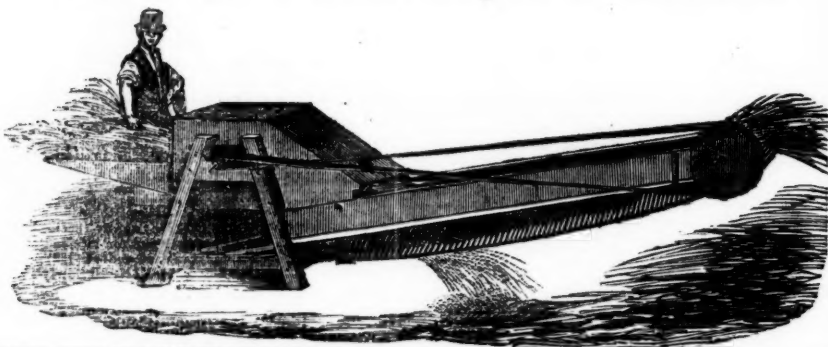
THE subscriber will furnish ground Bones, warranted free from every mixture, or the entire quantity forfeited, at 55 cents per bushel. Also a second quality article, composed in part of Bones, and in part of Flesh of Animals, being a quick and powerful fertilizer, at 35 cents per bushel.—Col. W. W. Bowie, the well known "Patuxent Planter," who receives his supply of bones from my Factory, says that the "bone dust at 55 cts. per bushel, was the best I ever saw." Orders may be left at the "American Farmer" office, directed to me, or at the Factory below the Race Course, Canton, near Baltimore, will meet prompt attention.

None of my manufactured Bone Dust is sold except at my Factory. JOSHUA HORNER.

My second quality is a new article of manure; I commenced making it from reading that portion of Dr. Higgins' report, in which he advises farmers not to buy made up or compound manures, but to make their own, viz: to procure the offal of the slaughter houses, &c. and boil the same and mix it with their barn-yard manure.—The article I offer to the public is made from the flesh of animals boiled, mixed with plaster and charcoal, to preserve the ammonia—lime, soda, and ashes, are also used in small proportions, in the process of manufacture—it is put up in pie, under cover, for 6 to 9 months, the whole mass is then mixed with an equal quantity of ground bones.—There is no grand secret in this preparation—it is a substantial, quick and powerful manure, combining the durability of bones with the immediate action of guano, and hardly second to the latter, for insuring an immediate return for the investment.

I furnish to my customers, when bags are not sent, 2 bushel bags, at 6 cents each. J. H. aug. 1-61*

Sinclair & Co.'s Threshing Machine and Separator.



The effort of manufacturing Threshing Machinery, possessing the important requisite of combining strength, durability and simplicity, we believe is fully attained by the machinery we are now making for that purpose. The cylinders are made open, with six beaters, covered with heavy wrought plate iron, which prevents any possible wear to the surface of the beaters, and well secured by a strong wrought iron band at each end and in the centre. Cylinders made upon this plan act upon the principle of a Fan, thus preventing that vast collection of dust around the feeder, which must be the case in using the solid cylinder. Those wishing to purchase, by giving timely notice, will be furnished with our best patterns, and warranted.

The following set is generally preferred:

Lever Power, No. 2,	price \$100
Thrasher, 25 inch,	50
Straw Separator, 25 inch,	18
Driving Band,	10

\$178

Also, Lever Powers of extra capacity—price \$135.

Wrought iron Rail-way or Endless Chain Powers, for one or two horses, latest improved—price \$75 a 100.

20, 25 and 30 inch Thrashers—\$40, 50 a 60.
do Straw Separators—\$15, 18 a 20.

Oil can, wrenches, and Directions for management furnished gratis.

Horse Hay, or Gleaning RAKES—a most excellent Machine; every farmer should have at least one—price \$8 to 11.

Loafer Hand Rakes, for manual power—capacity equal to a dozen common hand Rakes—\$2.

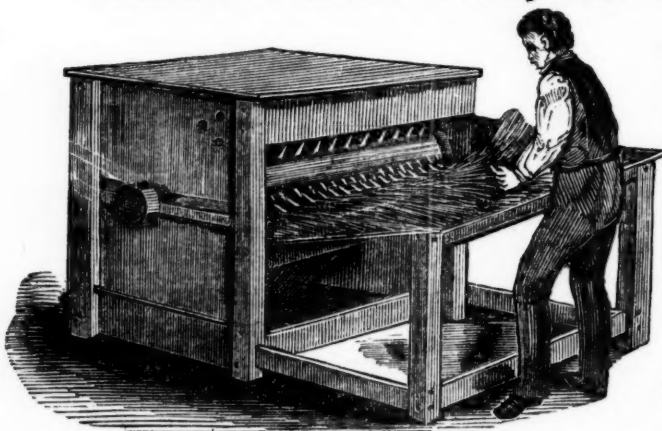
In store—a general assortment of CHURNS, OX YOKES, &c. Also, HARVEST TOOLS of every description.

R. SINCLAIR, JR. & Co.

ly. 1

58, 60 and 62 Light street.

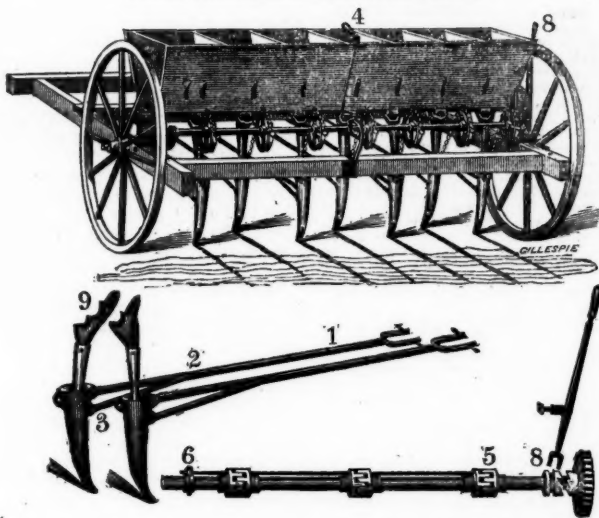
Whitman's Premium Iron Cylinder Thresher.



This Thresher received the First Premium in Baltimore in 1849 and 1850. It is taking the place of all other threshers in this country, and is admitted to be the best Thresher in use. The cylinder being all in one piece of iron, will last one hundred years in constant use; and will do more, and better work, than any Thresher that can be made. No farmer who knows the advantages of this thresher, will use any other.

Price for large size \$50; smaller, \$44. For sale by E. WHITMAN, Jr. & Co. Balto., Md.

SINCLAIR & CO.'S PATENT WHEAT DRILL, WITH VALUABLE IMPROVEMENTS.



THE above Fig. represents our Patent Wheat Drill, and the same (with late improvements) as that exhibited last November at the Talbot Co. Agr. Fair, and which contested successfully for the First Premium against several similar machines from Delaware, Pennsylvania and N. York. The present construction is equally simple and more durable, and possesses the advantage of improvements and additions which experiments of last year have suggested. The tines (3) being arranged angular and hung on the swing principle, prevents the machine from choking with grass, corn roots, &c., and allows them to rise or fall according to the grade of the land. By the lever (4) and chain to each tine, one, a portion, or all, may be thrown up instantly; also, by slides, (7) either or all the cylinders may be prevented from acting at pleasure, or the entire cylinder shaft thrown out of gear by operating on lever (8, 8). The receivers (9) are so arranged that the driver can observe the grain falling from each cylinder, which advantage, with the hoppers

being equally divided, insure a certain check against irregular seeding. The brace (2) is attached to the tine by a wooden pin—intended to break when the tine comes in contact with fixed roots, &c.; new pins are provided for replacing the same; also on top of same brace three holes are made in the swinging or main lever; (1) which allows the tine to be set less or more inclined, and intended to give more or less depth of furrow. The cylinders (5) are in two parts, and separated or closed by two pinch screws (6) attached to an iron rod, which allows the cups to be formed to any and uniform size, and to drop any desired quantity of wheat per acre. The ends and bottom of the hopper are of iron, accurately adjusted, which prevents derangement of the works, consequent to shrinkage, that wood is subject to. The machine may be worked by 2 or 3 horses—if for the former a pair of shafts will be necessary. Directions will be furnished with each machine relative to management. Price \$90
je. 1 R. SINCLAIR, JR. & CO.

Fruit and Ornamental Trees for Sale.

50,000 PEACH, of one and two year's growth from the bud. 40,000 APPLE—5,000 CHERRIES—5,000 DWARF PEARS—each containing all the most esteemed varieties, and of large size. Also, Quinces, Plums, Nectarines, Apricots, Almonds, Grapes, Raspberries, Gooseberries, Currants, Strawberries, &c., &c.
50,000 Silver and Ash Leaved Maple Seedlings of one year's growth.—50,000 Apple Seedlings.

The above will be sold in large or small quantities on the most reasonable terms. Persons residing at the South and West, should send their orders early, so that the trees could be forwarded by the last of October, or first of November.

Catalogues with prices annexed will be sent to all applicants.
ISAAC PULLEN,
Aug. 1-3* Hightstown, Mercer Co. New Jersey. Aug 1, '51.

Oil Vitriol, or Sulphuric Acid.

THE undersigned, being largely engaged in the Manufacture of Oil of Vitriol, is prepared to furnish it to farmers for dissolving bones, put up in strong Carboys, at lowest price for cash or town acceptances.

Feb. 1-4f. P. S. CHAPPELL, No. 158 Lombard st.

DUVALL & IGLEHART, GROCERS AND COMMISSION MERCHANTS, No. 78 LIGHT STREET WHARF.

Invite the attention of their friends, and the public generally, to their large and general assortment of GROCERIES, embracing every article in that line of business, and which they will sell upon pleasing and liberal terms, and at the lowest prices. Any one in want of any article in their line will find it to their advantage to give them a call. They will also pay particular attention to the sale of all kinds of produce.

FOR SALE.—A thorough bred Durham Bull (sire and gr. dam imported) of handsome form and colour, 2 years old last May. Price \$50.—One bull calf 11 months old, out of an Alderney cow, by an imported Ayrshire bull, combining the two best and hardiest dairy breeds. Price \$25. The sires of these two animals, and the dam of the first, have taken premiums at the exhibitions of the Maryland Agricultural Society, and the Fair of the American Institute, New York. Enquire of Mr Sands, at the office of the Farmer. Aug. 1-1t.

WANTED—Copies of the March No. of Vol. 3 of the *American Farmer*, New Series, for which a reasonable price will be paid at this office. Aug. 1-1t

To Planters, Farmers, Gardeners and the Agricultural Community in General. AGRICULTURAL DEPOT!!—BALTIMORE.

THE undersigned having on the 31st January last purchased the entire interest of his late Partner, Mr. Davison, will continue upon his own account the compounding of **CHEMICAL MANURES**, with all the energy he possesses, and all the *practical and scientific* experience he can command. For the success, almost unparalleled, which has heretofore attended his efforts, and the confidence which has been manifested towards him by the Agricultural community, he not only entertains the warmest gratitude, but finds the strongest incentive to renewed efforts in a cause so deeply interesting to the whole public, as the improvement of, or renovation of, old and worn out Land.

The Simple and Compound Manures sold by him have now passed the ordeal of amply tried experience, and have a **STANDARD REPUTATION**, from here to Charleston, which in his hands shall never be reduced, either by design or neglect. The certificates which through the columns of the *American Farmer* he has presented to the public, embracing the names of the most accomplished, intelligent and practical agriculturists of the country, is irrefragable testimony of the necessity, practicability, and success of his enterprise. Each season presenting a greatly increased demand, confirms this.

He has now for sale, his pure *Biphosphate* "*Mixture of Potash and Plaster*," "*Generator for the Tobacco Plant*," the very best "*Ground Plaster*," "*Oil of Vitriol*," and every chemical Residium adapted for crop or land. Pamphlets containing certificates, directions, &c., will be forwarded to all who feel sufficient interest in the subject to write for them. Soils will be analysed sufficient to show what particular elements it requires; and a salts compounded so as to be adapted to its wants. In a word, all that *enthusiasm* in the cause, energy, and constant attention, with an anxious desire to acquire information from every source, can do, will be done by him, to fully and successfully develop an enterprise the first ever attempted upon the same scale in this country, and which all must admit, if truly meritorious, is greatly needed, and deserving of consideration and patronage.

In point of durability my Salts are only subordinate to Lime, and at the same expense fully its equal.

Renovator,	\$20 per ton or \$3 per bbl.
Biphosphate,	28 " " 4 "
Generator,	28 " " 4 "
Plaster and Potash,	\$2.50 per bbl.

JOHN KETTLEWELL,

Successor to Kettlewell & Davison.

Office at the wholesale Drug Store of Ober & McConkey, corner of Lombard and Hanover streets.

Factory, Federal Hill.

P. S.—His friends in Virginia, North Carolina, Georgia and South Carolina, who intend buying his manures, should order early, so as to get the advantage of "summer freights," and avoid disappointments. Satisfactory acceptances, payable in Baltimore or Southern cities at 4 and 6 months, according to quality will be acceptable. aug. 1

PENNOCK'S PATENT

SEED & GRAIN DRILL.

PUBLIC attention is respectfully invited to some of the improvements recently made in this machine; also to its many important advantages over other seed planters.

1st. The Seeding Cylinders are now made to plant $1\frac{1}{2}$ and $1\frac{1}{4}$ bus. of wheat, and 2 bus. of oats to the acre, without any change; and these quantities may be varied as desired.

2d. The peculiar form of the depositing-tubes cause them to run easier, and to free themselves from filth much better than any others.

These depositing-tubes are supplied with reversible steel points, either end of which can be extended several times, as they become worn. Each set of these points is a saving to the farmer of from 12 to 15 Dollars over those ordinarily used, while the cost of renewal is about the same.

3d. For convenience in handling, storing, and for the greater safety of the machine while moving from place to place, the depositing tubes can instantly be disengaged from the drag-bars and from the body of the machine, without the use of any kind of tools.

This arrangement adds much to the permanency of the machine.

4th. The entire seeding apparatus, or any desirable part thereof, is thrown into or out of operation by one simple movement. This arrangement enables the operator to do his work much more easily, perfectly and expeditiously than is possible with any other Seed Drill in use, particularly in seeding point and other irregular shaped lands. All other seed planters require the attention of the operator upon at least two distinct movements at the same time.

5th. Our depositing tubes are hung upon side-bearings, to prevent a wobbling or lateral movement of their points, and are arranged to turn forward when the horses set back with them in the ground, thus avoiding the possibility of either breaking or clogging them with earth.

They also not only possess all the advantages of being open behind, to allow the operator to see that the grain passes properly into the earth, but those hinder openings are furnished, upon each side, with rearward flanges or wings, as a very necessary protection against the dirt closing in upon the grain before it reaches the bottom of the drill furrow.

We carefully avoid the old method of zig-zagging or staggering the depositing tubes, unless they are especially ordered so.

First—Because each alternate row of grain, thus seeded, is buried much deeper than the other rows, (and very often too deep.)

Secondly—Because it deprives one-half of the crop of the great advantages of side ridges, which are made to protect it from winter lifting, droughts, &c. by the frosts and rains filling them in upon the roots of the young plants.

The machine is warranted not to injure or waste the grain in seeding; to distribute it with equal certainty upon rough and hilly, as upon smooth and level land; to be made of good material and in a workmanlike manner, and to give better satisfaction, under all circumstances, (as a Seed and Grain Planter) than any other machine of the kind.

These machines, with a great variety of other Agricultural Implements, always on hand,—and prompt attention given to orders for Iron Castings of all kinds; also, for Steam Engines, Mill Work, and Screw Cutting, by

S. & M. PENNOCK, Kennett Square, Pa.

P. S.—E. WHITMAN, JR. & Co., Baltimore Agents.

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